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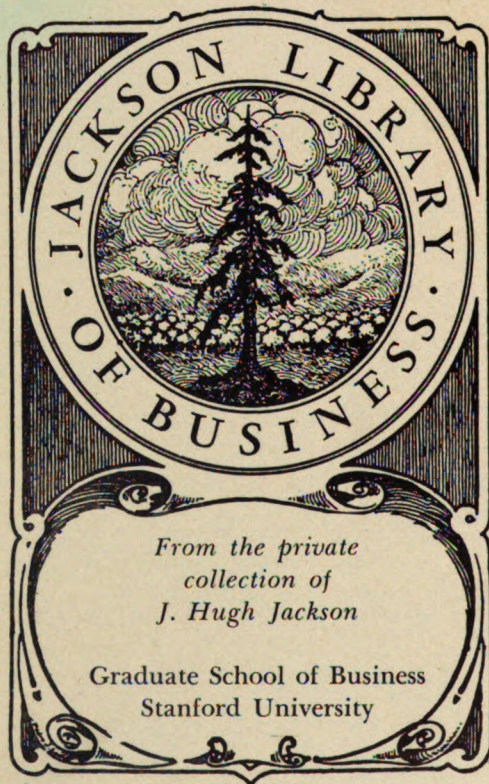
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THE JOURNAL OF ACCOUNTANCY

VOL. XXVII
JANUARY, 1919—JUNE, 1919

NEW YORK
THE RONALD PRESS COMPANY
20 VESEY STREET

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The Journal of Accountancy

Official Organ of the American Institute of Accountants

Vol. 27

JANUARY, 1919

No. 1

Accounting of Commission for Relief in Belgium*

By L. D. MAPES.

The Commission for Relief in Belgium and its principal affiliated organizations are as follows:

- (1) The Commission for Relief in Belgium, for short the C. R. B.;
- (2) The Comite National de Secours et d'Alimentation, for short the Comite National (or C. N.);
- (3) The provincial committees in various parts of Belgium;
- (4) The Comite d'Alimentation du Nord de la France, for short the Comite Français (or C. F.);
- (5) The district committees in various parts of the north of France;
- (6) The Section Agricole du Comite National;
- (7) The Bureau Produits Divers (discontinued in 1916);
- (8) The Ship Owning Department, or the S. O. D.

Mr. Hoover has stated that the gigantic proportions of the problem could only find solution by systematic decentralization, both in collection and distribution.

In collecting funds or other gifts for the work, the general scheme of decentralization was extended so that the commission had relations with over 100 principal committees, and these in turn covered a field of over 2,000 sub-committees engaged in providing support to the commission's work.

In the distribution, advantage was taken of the communal system; local relief committees were organized in practically every

*A paper read before the American representatives of the Commission for Relief in Belgium, at Brussels, March 16, 1916, and since revised to October 31, 1917.

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commune, and there was created over these committees a system of regional, district and provincial committees, with the *Comite National* at the apex, the relation of this organization to the C. R. B. being one of joint endeavor.

The interlocking of the committees is about as follows:

The communal committees are represented in the regional committees. The regional committees are represented in the provincial and district committees.

Delegates from the provincial and district committees act as working members of the *Comite National* and *Comite Francais* respectively.

Some of the members of the *Comite National* are members of the *Comite Francais*.

The C. R. B. is represented by delegates on both the *Comite National* and the *Comite Francais*.

Of the 7,000,000 inhabitants in Belgium, it has been estimated that 2,750,000 were found to be wholly or partly destitute as a result of the war and without resources with which to pay for food or clothing even if it existed in abundance. Inasmuch as the 2,300,000 inhabitants, as a whole, in the north of France are being supplied from without and not paying anything back to Brussels in return, they must also be treated in the calculations as if they, too, were all destitute, although many who are able to do so are obligating themselves in one way or another to pay at the end of the war, and a good many are paying in communal money and some in French money.

Engaged in the work here there have been about 130 regional and over 2,500 communal distributing committees, and about 1,500 relief committees in Belgium. In the north of France there have been about 70 regional and 2,100 communal distributing committees.

At the start the outside world was practically asked to take up furnishing the bread supply for the whole nation, as a matter of benevolence. Later, certain relaxations came regarding financial transactions, and the work of provisioning the population developed along commercial lines, being completely separated from the actual benevolent work, so that those who had resources were able to pay and thus help to make the general burden easier. Belgian banks and institutions have furnished very large sums for the working capital of the provisioning department.

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THE COMMISSION FOR RELIEF IN BELGIUM

The C. R. B. has offices in New York, London, Rotterdam and Brussels.

Necessarily the London office has been made the central office, as New York is too far away from the points of distribution to be effective as a center for general management.

In New York, gifts are received, funds collected, purchases made and paid for and vessels are arranged for, loaded and dispatched.

London negotiates with the English authorities, collects gifts and funds, receives remittances for Belgium, keeps accounts of the cost of the various cargoes, establishes the prices to charge Brussels for the goods and advises Rotterdam thereof, and has remitted money to New York to help pay for purchases. In view of later developments wherein the United States government is to do the financing, money will be sent from New York to London.

Rotterdam receives the vessels, arranges for the barges, attends to the unloading, reloading and also to storing of goods, charging Brussels for all the goods shipped into Belgium and the north of France at the prices established by London, and advises London office thereof.

Brussels office negotiates with the German authorities and attends to the distribution of the food supplies, but the accounts of the C. R. B. at Brussels do not deal with food supplies, but simply with the expenses of its office and its branches, the expenses of the American or other representatives, automobile expenses and things of that character.

The American or other representatives, with headquarters at Brussels, are so many agents of the C. R. B. distributed around Belgium and the north of France. They are financed by the C. R. B. of Brussels.

Their functions are:

- (a) To assist the Belgians and people of the north of France.
- (b) To correct abuses.
- (c) To carry out the guarantees.

It is well to note here that in organizing the C. R. B., the C. N. and the C. F., the plan was adopted of having practically all reports and records relating to quantities received or issued

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kept by the statistics department, as distinct from the accounts department, the latter keeping, in addition to values, such quantity records as were closely connected with and necessary to the entries on its books.

New York Office:

The principal departments dealing with accounts are:

Purchasing department,
Transportation department,
Accounting department.

A summary of the principal records is as follows:

Purchasing. Several copies of each confirmation of order are issued when purchases are made: to seller, to accounting department, to transportation department; and a copy is retained. The copies for the accounting and transportation departments are ruled on the back to admit of entries showing the progress of deliveries. The sheets are filed by commodities and contract numbers.

The purchasing department keeps a record of contracts, which is a complete record from quantity purchased and from whom down to the authorization of the payment for actual delivery, in order to see that all goods ordered are consigned, unless canceled for good reason.

Transportation. The transportation department designates routes on shipments from points of origin to f. o. b. points and beyond to destination, seeing to it that all goods delivered to the commission are shipped to Europe. It advises London by wire regarding each steamer, when ready, as it clears. It makes no reports except as to tonnage on hand.

The principal records kept by this department are:

Manifest book, by steamers.
Record book of consignments of donations.
Contract files, being yellow copies of purchase orders.
Claim register.

When the C. R. B. is notified that a consignment of purchased or gift goods has been made for shipment direct to steamer, this department records the fact on a "primary record of consignments" a copy of which is sent to the commission's shipping

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agent, who signs and returns it as receipt for the bill of lading, etc. Therewith he also returns a cargo list of actual merchandise loaded on steamer, which is used in making up the manifest book (by steamers) and the manifest, a memorandum of which is kept and filed with the steamer record.

Memorandum is kept of goods left over after steamer is full to ensure proper shipment later and against their loss.

Records of consignments of purchased goods are kept on back of the contract copies of order for this department.

Records of donated consignments are kept by committees, then shippers, car number numbers, etc., in the book for that purpose.

If case goods arrive at the commission's warehouses without notice from consignors, the warehouse representatives take them into stores, notifying the commission, which attends to the shipment in due course.

Other records are kept regarding consignments, their point of origin, etc.

Accounting. The usual books of account are kept by the accounting department including contract ledger (copies of order), voucher record, steamer record and stores record, arranged so that proper authority is had for the actual receipt of goods for which or their transportation and handling proper payments are to be made.

Summaries of invoices, showing cost of each steamer cargo, and weekly cash payments are sent to London.

Rotterdam Office.

The principal records of the Rotterdam office are kept by the statistics and accounting departments.

The statistics department deals with cargoes from their sailing date at point of departure, through their expected and actual arrival at Rotterdam, to shipment into Belgium.

This requires much detail on account of the many steamers, lighters, tugs, commodities and points of receipt for them in Belgium and north of France. Record must constantly be kept from charter parties and other data to ensure proper payment of freights, handling etc., of commodities, to see how much is on hand, how much en route, how much actually has arrived, how much has been shipped and the available balances. There must

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be record of points of receipt to note against requirements, the amount permitted to enter, the amounts actually shipped and the balance still to send.

Recording of the inspection of cargoes landing, lighters loaded, the sealing up of loaded lighters, the storage in elevators or warehouses, handling and insurance of cargoes forms a part of the work of this department.

Daily reports are made to the management, by commodities, of shipments and general situation with Belgium and north of France, and also regarding the lighters and tugs available.

Brussels and London are kept advised of steamer arrivals, of the out-turn, in quantities, from steamers, and of lighters and rail shipments from Rotterdam. Brussels and London are advised by cost sheets, in quantities and amounts, and by control sheets of commodities shipped and on hand.

The accounting department keeps cash and other records usual to any business concern. In addition, some of the most important records or reports are noted in the following paragraphs:

The commission's customs agents report on the clearance of incoming cargoes and these reports are checked against other data in the hands of the accounting department.

Ship's statements with details and summary of Rotterdam charges are made up and sent to London as soon as is advisable after landing of cargo—say, two months.

As to those cargoes which have been completely shipped (or nearly so) or disposed of, the statistics department makes up completed cargo sheets from copies of cost sheets sent to Brussels. Copies of the completed cargo sheets are sent to Brussels and London. The cost sheets are summarized and totals agreed with those of the completed cargo sheets.

All payments at Rotterdam for freights, unloading, reloading, handling, lighterage, towing, office and other expenses are reported to London office.

London Office.

The central office records are kept principally by the purchasing and shipping, statistics, commercial exchange and accounting departments.

The purchasing and shipping department attends to the chartering of almost all vessels, sending copies of American charters

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to New York and all charters to Rotterdam. Files for each ship's voyage are kept, wherein are filed the documents belonging thereto.

This department arranges all marine insurance and insurance on stocks in United Kingdom. It also passes freight and other charges for payment, and follows up overages, shortages, losses and damages on cargoes, claiming on these latter and advising the accounting department in due course.

Purchases in the United Kingdom are made and records kept of deliveries against contracts, passing bills for payment by the accounting department.

The accounting department is given a summary statement of each shipment from United Kingdom port as soon as possible after ship has cleared and invoices are received.

The statistics department receives information from all C. R. B. offices regarding merchandise at all stages—from requirements, probable and actual shipments, arrivals and stocks down to shipments into and receipts by Belgium and northern France.

These reports are mostly in quantities, using such values as are needed by this department in making up reports to the management for controlling purposes, for the prompt ascertainment of costs of commodities and for the valuation of stocks, and for the accumulated sales values of shipments by Rotterdam.

The commercial exchange department receives money for transmission to Belgium and issues sterling letters for Brussels.

The remitter fills out a request form, giving name of payee and address, etc., when seeking to transfer funds to Belgium.

The commercial exchange department hands him a receipt, notifying at the same time the London bank, the accounting department and the Comité National at Brussels, sending the latter also a slip to be returned when the payment has actually been carried out. When the latter has been received in London the remitter is notified accordingly. The C. N. keeps on file, in good order, at Brussels, the actual receipts for the money so paid out there.

London keeps numerous banking accounts in various currencies for convenience in making money transfers or payments in other countries.

The accounting department keeps the customary books of account, so arranged that the transactions of the various offices

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show separately. This department has on file all the accounts statements received from the other offices. It keeps track of all funds received up to their final disbursement.

A feature of this department is its steamer files, one or more dossiers for each steamer, in which are summarized the cost values, etc., for each voyage. The details are first entered elsewhere, in turn again summarized for the month and year, so that the costs, sale price and profit and loss are agreed or reconciled with purchase, freights and sales accounts and with gross profit for the year respectively.

London keeping its accounts in £ s d had to arrange for converting Belgian francs into sterling so as to facilitate the accounting. Therefore the rate of fcs. 25.40 has been used between Brussels and London in all the charges and credits back and forth, except in regard to the sterling letters already mentioned. Dollars have been taken at \$4.85 to the pound sterling, and florins at 12.03. When actual remittances of money occur between Rotterdam, London and New York, the current rate prevailing at that time is used.

All the accounts of the C. R. B. at New York, London, Rotterdam and Brussels are subject to audit.

THE COMITE NATIONAL.

The Comite National is very closely affiliated with the C. R. B. It is divided into two departments:

- (a) Provisioning department,
- (b) Benevolent department.

(a) The Provisioning Department:

The provisioning department is the merchandising end of the Comite National. It receives from the C. R. B., Brussels, copies of the bills of lading from Rotterdam as handed to the various skippers for the shipments by their lighters. It receives the cost sheets for the goods in numerical order from Rotterdam, and also copies of the out-turn reports of the steamers. Later on it receives the monthly completed cargo sheets in duplicate.

The cost sheets enable the Comite National to charge the goods at once to the provisional committees or to the Comite Francais, which in turn charges the district committees in the north of France. The cost sheets are entered in steamer books to form a ready basis for checking the completed cargo sheets, for

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these latter have to be certified by Brussels, and a copy is sent to London. The actual charges to purchase account on the general books for the goods and the credits to London are made from the totals of the completed cargo sheets, and those cost sheets not yet included therein at the end of any month are considered provisionally as being estimated purchases.

The C. R. B. at Brussels sends a bill of lading to the committees where the various barges are to unload and the committees pass them on to their depots. The Comité National, having also a copy, knows that the goods are shipped and sends bills for the goods so forwarded, charging provincial committees or Comité Français and crediting sales account. Should, however, the goods go instead to stores or to mills, the billing is done only when shipment is actually made later on.

When goods are unloaded at destination, several copies of a receipt of shipment are filled out and signed by the C. R. B. representatives there or some other responsible person; copies are sent to the C. R. B., Rotterdam and Brussels, to the Comité National or Comité Français and to the provincial or district committee. The skipper of the barge also receives a copy.

The provincial depot makes a daily stock report in quantities to the provincial committee of goods received, issued and balance on hand. Some of the provincial committees keep track of how much goes to each commune.

The provincial committee makes a white monthly stock report to the Comité National, showing in detail, as to quantities, the receipts as made up from receipts of shipment and from the bills sent by the Comité National. It also sends a gray monthly summary in quantities showing total receipts as per the white report and the totals issued to each regional depot for the period.

Each regional depot reports each month to both provincial committee and to Comité National on a green summary the quantities of goods received, issued and the balance on hand at close of month. The receipts should agree with the issues as per the gray report of the provincial committee. The districts and regions of the north of France report in the same way each month to the Comité Français.

The representatives of the C. R. B. are responsible for seeing that the stock reports of the provincial committees and regional depots are properly made up and promptly sent in to Brussels.

These reports are summarized and sent to the C. R. B., London and Rotterdam.

The Comite National and the Comite Francais keep stock accounts of the goods in their own stores at various points, and also of goods at the provincial and district depots. The latter are controlled by means of the reports sent to them as above stated, so that they know what is at each point.

The communal committees advise the regional depots of their requirements and the latter advise the provincial committee. The latter authorizes the provincial depot to ship to the regional depots and at the same time authorizes the regional depots to ship to the communes. In the north of France it is done in a similar manner.

The provincial committees keep ledger accounts with the regional depots, charging supplies and crediting cash. Some provinces collect before actual shipment of goods. The regional depots ship goods to the communes and keep accounts with them in much the same way as has been described. Inspectors from the provincial office visit both regional and communal depots.

In the communes, families are supplied by each commune with cards to be used once a week at the depot or store when purchasing up to a certain maximum per person in the family, entries of dates being made on the cards by the communal depots or stores at the time of purchase. The communal depots or stores keep records of their sales each day and send to the provincial committee each month a summary, in quantities and amounts, of their transactions for the period.

The people in Belgium thus pay the communes; the communes pay the regions; the latter pay the provinces; and the provinces pay the Comite National. The Comite National supplies its benevolent department with funds; these are paid out as explained above, and so the wheel goes around, depending on the C. R. B. outside of Belgium to keep on collecting funds and buying and shipping goods.

After the C. R. B. had been operating for a time it was found that there were a good many Belgians in England and elsewhere who desired to send money to their relatives in Belgium. Arrangements were made whereby they were allowed to pay in money to the London office, directly or indirectly, London advising the Comite National, Brussels, by means of sterling letters. Thus

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some of the money received by the latter, in payment for food products sold to the provincial committees, is paid out against these sterling letters. This acts, in effect, as money sent to London by Brussels and yet no money leaves Belgium. Not only has this helped somewhat to lessen the burden of the C. R. B. in collecting funds, but it has been estimated that 500,000 people provided for through these remittances, thus made available, were prevented from falling into destitution.

Milling.

All of the grain, either before or after going to the provinces or districts, has to be milled, and the milling accounts kept have been somewhat difficult.

Wheat quantities have been charged to these accounts at the wheat value, or theoretical quantities of flour have been charged at a price based on the same wheat value. After that credits of flour have been made to the account for flour coming from the mill, calculated at a unit price which would include the cost of the wheat and the compensation to the mill for its work, making a deduction also in case the mill retained and sold the by-products for its own account.

In calculating the theoretical quantities of flour going into the account and the unit price for the flour coming out, one had to take into consideration if 75%, 82% or 90% flour was to be milled. At the end of any period, after crediting inventory of stock still at the mill, disposition had to be made of the ultimate balance in the account.

Crop Adjustment:

A difficulty arose in the accounts in regard to the mixture of native and foreign wheat. The Bureau des Recoltes handles the native wheat, which is lower in price than the foreign. The Germans agree to furnish native wheat in given proportion to the foreign. The C. R. B. has to report each month to the Germans the cost of the foreign wheat, on which is based the price used by Rotterdam in billing Brussels. The Germans then calculate an average price for the mixture, at which price all the wheat must be sold.

Inasmuch as the wheat grown in one province could not be sent to another, it stands to reason that those provinces not rais-

ing wheat would not participate in the low price of native wheat, unless the price of their foreign wheat was lowered. The actual quantities of foreign wheat sold can never exactly agree with the theoretical quantity on which the average price was based. An adjustment subject to approval by the Germans was devised as follows:

Provinces to be charged and Comite National crop adjustment account credited for the quantities of native wheat they receive at the difference between the price of native wheat and the average price; whereas

The Comite National crop adjustment account was to be charged and provinces credited for the quantities of foreign wheat they received at the difference in price between the foreign wheat and the average price.

On account of the excess, or vice versa, delivery of foreign wheat sold there will be a small profit or loss in this account each month.

The Benevolent Department.

The operations of the benevolent department are divided into ordinary and extraordinary, the broad distinction being that those of the extraordinary department are for account of the Belgian government, while those of the ordinary department include all other transactions, mostly of a charitable nature.

Food, clothing, money and shelter are provided by this department, which gets a credit from the Comite National of many million francs per month to pay for them.

Food is issued by communal committees for which money is given the provinces to buy the supplies for the soup kitchens, a large part of the food coming from the various provisioning department depots. Shelter is provided by these committees, to pay for which they also receive money.

Clothing is supplied by the clothing department, which buys new clothing, receives clothing from outside Belgium, and cleans, alters and repairs used clothing, necessary money for doing which comes out of the benevolent department funds.

Money is paid out in a variety of ways—to aid the unemployed, to relieve the families of soldiers and officers, to assist charitable institutions, to finance provinces by providing the equivalent of

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taxes which had been collected by the government and to which the provinces were entitled, so as to help them in their work, to carry on schools (this for a short time only), to lend to banking institutions in order that they may pay military requisitions given to the populace at the beginning of the war, and pay salaries of railroad employees, all of which makes up part of the general scheme of helping others to help themselves. Where possible, the money or a large part of it, eventually goes toward the purchase of food and much of it comes back through the communal, regional and provincial committees to the *Comite National*, provisioning department, and is again handed over to the benevolent department, and so on.

Any profits made by the C. R. B. and *Comite National*, etc., are to be used for benevolent purposes.

Every month statements of expenditures and a balance-sheet are made up for the benevolent department and are subject to audit.

THE PROVINCIAL COMMITTEES—BELGIUM.

There are ten provincial committees in operation in Belgium. Each of these has separate headquarters, storehouses, staffs and sets of books. Each provincial committee (except Brabant) is supported by a co-operative society, the participants in which are individuals and sometimes communes. It is understood that any profits are to be used for benevolent purposes, except a reasonable rate of interest on the money furnished, said to be about 5%.

These committees have raised outside loans to assist in their financing. They have current accounts with the *Comite National*, the balances of which are confirmed each month.

Prices to them are fixed by periodic agreement and should be approximately uniform, the excess freights of some provinces over others being rebated to them. The provinces charge to the communes at a small advance, and the latter are supposed to resell to the population without profit.

The resources of communal committees have been received from:

- Local charity,

- Cash subsidies from communal authorities,

- Cash subsidies from regional or provincial committees,
and from the C. R. B. representing gifts from abroad.

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Some of the provincial committees have set aside considerable sums out of profits for benevolent purposes, as shown in their accounts.

THE COMITE FRANCAIS.

The Comite Francais is a separate organization formed in order to group or centralize the north of France transactions as a whole.

The plan of its organization has been mentioned already. It has separate storehouses, a separate office staff, and a separate set of books, etc., and is charged by the Comite National for all stuffs sent to it or to its districts in the north of France. The Comite Francais itself invoices to the districts.

It receives stock reports in quantities from the districts and regions and controls them in practically the same way as the Comite National controls its committees.

Up to September 1, 1915, the Comite National had been charging goods to the Comite Francais at a slight profit, the same as to the provincial committees, but it was decided that all such profits should be rebated to the Comite Francais and this was done, the Comite Francais in turn distributing the bulk of the rebate to the district committees since.

The Comite Francais draws off a trial balance from its books each month, from which periodically a balance-sheet and profit and loss account are made up and subjected to audit.

THE DISTRICT COMMITTEES—NORTH OF FRANCE.

The ten district committees or sub-committees are organized in much the same way as the provincial committees, except that actual financing cannot be done, and therefore there has been a more or less wholesale scheme of obligations all around, promising to pay shortly after the close of the war.

Owing to the state of affairs, naturally, there is great restriction in regard to moving about the country on the part of individuals, which makes business transactions much more difficult than in Belgium.

The district committees have separate accounts, the current account balance with the Comite Francais being confirmed at the end of each month.

Accounting of Commission for Relief in Belgium

THE SECTION AGRICOLE DU COMITE NATIONAL.

The Section Agricole is a consulting and administrative body to the various agricultural sections of the provincial committees, which aid farmers, obtaining the funds therefor from the benevolent department of the Comite National.

THE BUREAU PRODUITS DIVERS.

The Bureau Produits Divers was organized to take up the work of importing goods outside the regular staple lines of the C. R. B. and Comite National. It was allowed to import up to frs. 1,250,000 worth per month.

It was financed by the Comite National. The provincial committees sent covering cheques with their orders for goods. It had a small separate working staff and a separate set of books, reporting to the Comite National. It is now discontinued.

THE SHIP OWNING DEPARTMENT.

The ship owning department, sanctioned by the C. R. B., was started for the purpose of owning and operating barges and tugs in the interest of the C. R. B. It is under the control of the Antwerp committee but financed by the Comite National. It will have assets and liabilities on its books and an operating account, the income being derived from a moderate rate to be charged to the Comite National for lightering and towage, the expenses incidental thereto being charged against the income. All profits or losses are to be for the account of the Comite National.

GENERAL.

In the final accounting the leading committees will have to render statements which will clearly show what funds have to be accounted for and what disposition has been made of them.

The C. R. B. should show the money and money values received, plus profit made, against which should be shown merchandise, etc., supplied to the Comite National, less any benevolent expenditure made for account of the C. R. B., together with any assets still on hand, such as stock, cash, debtors, etc., less creditors if any.

The Comite National should show the amount of merchandise and cash received from the C. R. B., plus profit made, against which should be benevolent expenditure, merchandise and cash

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supplied to the Comite Francais and also any assets such as stock, cash, sacks, provincial committees and other debtors, less creditors, etc.

The Comite Francais should show merchandise and cash received from the Comite National for account of the C. R. B., plus clothing values or rebates received and profits made. Against this should be shown the amounts owing by district committees or others, amounts donated to various committees, plus cash or evidences of indebtedness, stocks and sundry debtors, less creditors.

Operation of the British Excess Profits Duty Law

By MAURICE E. PELOUBET

It will, I think, be recognized everywhere that the legislation adopted in England shortly after the outbreak of the great war, and retrospective to the beginning of hostilities, for the purpose of limiting abnormal profits, due to the war, was a departure in financial legislation which, while urgently necessary, was at the same time bold, new and opposed to some of the most strongly marked tendencies in British commercial and financial, to say nothing of economic and social, life.

For a nation so extremely individualistic as the British, much more so I think than is the case with the United States, to submit to a form of taxation which involved rigorous control of practically every business and the taking over by the state of from 50% to 80% of a large proportion of what the proprietors of those businesses thought was mostly the result of their own efforts calls for respect for the taxpayers' patriotism and far-sightedness in submitting quietly and with considerable good nature to the impost. No less does the adoption of such a measure by a government nominally devoted to free trade and the "laissez faire" principle, although with true British love of practicality and compromise it had fathered some projects which could hardly be distinguished from advanced state socialism, demand our admiration as a piece of courageous and constructive statesmanship.

It would be surprising, however, if such a measure turned out to be perfect, or anything approaching it. The excess profits duty has always been a workable and productive source of revenue. It has undoubtedly had a calming effect on labor. It has now been in operation so long that changes in fundamental principle are practically impossible. The only use therefore in pointing out the weaknesses of the British system of excess profits duty, which I believe is much superior, in practice, to the French or other European systems, is to make use of British financial and economic mistakes and experience, as we have of British mistakes and experience in other lines of war effort.

The main features of the British excess profits duty are:

- (1) The figure for normal or "standard" profits is, in most cases, based on an average of any two of the last three pre-war years.
- (2) The taxpayer was allowed to retain at first 50%, then 40% and now, from January 1, 1917, onwards, 20% of his profits above the normal in addition to,
- (3) A percentage on net increase of capital, at first 6% and from January 1, 1917, 9%, increased in special cases, such as those of rubber companies whose plantations have come into bearing after the outbreak of war or of new business begun after the opening of hostilities, to as much as double the statutory rate.

and, finally,

- (4) In many cases very large so-called "depreciation allowances" have been made.

In all the following discussion it must be constantly held in mind that in a country at war, in the modern sense, the government is both producer and consumer and buyer and seller, besides being the universal employer.

The management and directors of a business are merely a higher grade of state servants and their remuneration should not be regarded as the "profits of the entrepreneur," "wages of capital" nor in any way other than as the payment by the state for services rendered to the state with state property. For convenience, much of the old forms and terminology is of course still retained, but everyone in England realizes that his life, time and money are at the disposal of the state at any time.

The great objects, then, in any law similar to the British excess profits duty, are to ensure a fair and equitable reward for formerly independent business men, managers or directors; to make sure that any increase of this reward is based on real service rendered, i.e., increased production or efficiency, and not by taking advantage of conditions or opportunities in the creation of which they had no part; and to make certain that increases of prices are solely due to real causes, difficulty of transport, scarcity of raw materials or actual increased living cost, rather than to any financial causes or to manipulation of markets.

The British excess profits duty, to a large extent, does all these things but falls short of complete success, chiefly on account

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of the method used in calculating "standard" profits; because it allows a portion of the excess profits to be retained and because in general the provisions of the law relate, almost solely, to the financial side of business rather than to the productive or operating side.

The fixing of standards for two companies in the same line of business, say \$100,000 each, might work out as follows:

Three pre-war years:

Years selected by taxpayer:

	Co. "A"		Co. "B"
Year 1911	\$10,000		\$7,000
1912	9,000		8,000
1913	8,000		9,000
Year 1911	\$10,000	Year 1912	\$8,000
1912	9,000	1913	9,000
	<hr/>		<hr/>
	\$19,000		\$17,000
	<hr/>		<hr/>
Standard profit	\$9,500		\$8,500
	<hr/>		<hr/>

Co. "A" clearly is declining and, presumably, is becoming less efficient in operation while Co. "B" plainly is advancing.

Co. "A," however, for four or more years gets the benefit of a good year in 1911 while Co. "B" for the same period is penalized for mistakes committed in 1911 and 1912 and righted in 1913, besides getting nothing for what may be taken as a normal rate of expansion or improvement.

If, as is usually the case, both companies are on government work, there can be no question of normal expansion, ordinary work being stopped. Whatever expansion takes place is to take care of government orders. The pre-war profits of the individual companies are no criterion of what their profit on government work should be. Present production and efficiency rather than past good luck or good management are what should rule in fixing the reward for work performed under war conditions.

Yet some standard must be adopted and can only be arrived at from past results. It should, however, be so broadly based as to form an index of the normal profit earning capacity of the capital employed, not in an individual business or undertaking, but in a trade or industry taken as a whole.

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The method of computing the amount of capital employed by a company under the British excess profits duty law is sound theoretically both from an economic and accounting point of view, and the information can readily be extracted from any ordinary set of financial books. The capital employed is taken to consist of:

1. Share capital;
2. The difference between accounts payable and receivable added or deducted as the case may be;
4. Reserves;
5. Profits retained in the business.

Assets not used in the business are eliminated and if a company were carrying forward a deficit it would be treated in the opposite way to profits retained in the undertaking.

With this information as to capital and the figures for income all on a uniform basis, as shown by income tax returns, the taxing authorities are in a position to determine what percentage should constitute a fair return on capital employed in a particular industry.

The present method of making adjustments of the rate of return on capital for special industries is really an application of this principle and proves it to be practicable.

It is, of course, true that there is a board of referees provided for by the finance act to hear appeals for increases in the statutory percentage or in the case of certain inequitable assessments. This board, however, deals with one variety of claims only—namely, where the standard or percentage is too low. Of the assessments where the present system is unduly favorable it is safe to say none has ever been appealed against. The beneficiaries certainly would not appeal. The taxation officers can only enforce the law as it stands, and competitors have no means of getting the information on which to found a protest or appeal.

It is these cases, however, which are the sources of the extravagance and inflation due to the excess profits duty law.

If the standard as suggested above were applied and any increase in the profit allowed made contingent on and proportional to an increase in production or turnover, in goods not money, a reward for efficiency and energy would be provided which would ensure that these were devoted productively rather than to market manipulation or to securing a high selling price for the finished products.

Operation of the British Excess Profits Duty Law

No fraction, however small, of the excess profits, i. e., profits above the standard for the trade or business modified by the production of the individual company under review, should be retained by the taxpayer. If any part of such excess is retained the taxpayer will simply raise prices sufficiently to cover the tax and the increase desired as well. If no part of the excess is retained and the increase allowed is fair and liberal there will be no advantage to the taxpayer in inflated prices, while a financial reward will be given for increased production.

Under the present system there is a strong and direct incentive to raise prices and the smaller the percentage retained the higher will prices go.

The fact that the government, being the purchaser, pays with one hand and, being the taxing authority, receives with the other seems to cancel the two amounts. If this were the case the transaction would be merely ridiculous—but it is far worse than that, for between payment of the price of the goods and collection of the tax a long period elapses during which the amount of money in the country is greatly increased and a large sum is placed in the hands of firms out of which payments are made with great liberality for “repairs,” “renewals,” “improvements,” “renovations,” etc.

At the same time a feeling of great generosity toward employees, especially managers, departmental heads and executives generally, seems to come over the company. Directors’ fees are raised, bonuses and commissions are put on a higher level and everything is easy and liberal. It is not quite such a strain to be liberal where the government pays from a half to four-fifths, and it is a matter of very great difficulty for the taxing authorities to decide which of these various extraordinary payments are legitimate and which not. As a rule, all but the most flagrant instances are passed by the revenue authorities as expenses, deductible from the taxable profits.

What a firm cannot use in this way, it can leave in the business and get 9% on or deposit on account of payments to be made and get 5% until the tax is assessed. It can also buy war loan, say it is money held in reserve and get the interest on the loan, count its holding as increased capital and deduct interest received on loan from interest at 9% on the amount and deduct the difference from its taxable profits.

It can thus be seen the government pays interest on its own money until it collects it.

This system not only raises prices in particular industries but raises them generally by causing inflation of the currency. Although the American securities scheme, whereby substantially all the main American securities held in Great Britain have been bought by the government and sold in the United States, has kept the exchange rate on New York almost to the gold point, considering the increased cost of transportation and insurance, there is undoubtedly very considerable inflation of the currency in England—surely as much and perhaps a little more than that indicated by the various exchange rates.

The government also tacitly permits, occasionally unwittingly, the cost of whole plants to be taken out of what would be taxable profit in two or three years, especially in the case of aircraft or munition factories. It thus puts itself in the position of paying for these plants and not owning them, which is certainly a liberal method of providing for increased facilities if nothing else.

It is to be hoped that the United States government will not stumble into any of the pitfalls into which the early framers and administrators of the British excess profits duty law fell. They can, I think, all be traced to the fixing of a standard based on past results of individual companies, allowing any portion of the excess profits to be retained, increase of profits following increase of price, rather than increase of production or efficiency, and what amounts to payment for plants which did not then become government property.

It is easy, and so far as England is concerned useless, to criticize past mistakes in regard to the excess profits duty law. That law has worked better than anyone thought it would and was a measure of courageous and far-sighted statesmanship. I believe, however, that some of these facts pointed out may help in forming a public opinion which will tend to prevent the United States government, in attempting to copy the good points of the British excess profits duty law, from adopting the less advantageous ones.

Reconstruction Problems*

By F. W. GEHLE.

Mankind faces the future with no greater desire in its heart than to secure a glimpse of what is to be the aftermath of the war. There never was a more vital hour than that in which we are living. Having for more than four years struggled through the greatest war of all the ages, we have crossed the threshold of peace. Where lately we were thinking in terms of cannon, bayonets, war supplies and front line trenches, we have come suddenly to think in terms of reconstruction.

Our minds will not grasp the completeness of the change that has come about until the millions of men who are enlisted in France have returned from the battlefields to their homes and firesides. It will not be until then that we shall grasp the full magnitude of the task of making the world completely over.

In magnitude and importance nothing ever approached the problems that have risen to confront us. Some of these problems are wholly new. Others are old, in new aspects. They resolve themselves into five classes: moral, social, international, economic and financial.

Morally, socially and politically, the problems that face the world are so formidable and so involved in their nature, that we have no present way of judging how the future will solve them. This war was the crisis of a thousand years of history, and the degree in which it will bring about the consummation of society's ideals is so vaguely defined that statesmen to-day do not even hazard a guess regarding what is before us. Society has been and is being made over, in every sense, and on the completeness with which the allied statesmen who are now gathering in France build their foundation of peace on right doctrine, on justice and wisdom, will depend in a large measure the completeness with which society attains its ideals.

Human ideals are based, in the very nature of things, on certain fundamental principles. Hence, out of this war must come a vindication of these principles. That is why at the very

*An address before the New York State Society of Certified Public Accountants, December 9, 1918.

beginning of peace, problems will have to be settled involving reparation and punishment for the wrongs of this war and establishing guarantees for the world's safety in the future. Problems will have to be solved of alliances and pledges, of ties and enmities of recent birth, of friendships of long standing and hatred stretching back to antiquity. Problems will have to be settled—unless a way is to be left open for another world war speedily to follow this one—of governments, territories, boundaries, creeds and races.

Embracing, as it did, so vast a portion of the earth's surface, and having entailed such an unparalleled sacrifice of blood and treasure, the war must inevitably bring about government and territorial readjustments of far-reaching importance. That is plain to everyone. Readjustments of boundaries are certain to be made through the whole eastern hemisphere, just as readjustments of thrones and rulers have already been made. Affecting particularly Germany, Austria-Hungary, Russia, the Balkan states and Turkey, and taking in parts of Asia and Africa, these readjustments will be powerful factors in determining the condition of internal politics in all nations and of international policies in all the world.

These comprise one group of factors. There are other factors as well. Within a very short time, now, we shall have to take account of the lowered standards of existence that have come from having tens of millions of men revert to the primitive, both in defending and taking life. We shall have to take account of the check that has been given to education, law, literature, art, religion and all those measures of civilization that contributed to carry mankind forward, prior to 1914, in every sphere of endeavor.

THE ECONOMIC PROBLEMS.

The moral, social and political sequel of the war offers one formidable group of problems to absorb our minds and efforts from to-day forward. There are to be considered the economic problems and the financial problems as well. The world will have to consider these very seriously. The war's economic problems will have to do with such things as reconstruction and rehabilitation, with supplies of goods necessary for life, with commerce and industry, with international trade, with labor, with prices, with government control and labor restrictions and with the rights

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of property and individuals. The financial sequel will embrace those problems which govern capital and credit, state debts and currency inflations, taxes, deranged gold standards, the foreign exchanges and the national and international banking relations.

As with statesmen in their attitude toward the future of political and social problems, so with bankers in their attitude toward these other problems—the answers are too vaguely defined to permit any confident prediction, or more than expressions of hope and purpose. All the problems confronting the world are so immense that one's mind staggers at the contemplation of them all. Because of their magnitude, and because of the frightful wastage entailed by the war, they will not be solved in a week, or a month, or even a year.

Justice cannot be established with the speed with which it was overthrown. Terrible wrongs cannot be atoned at once. Territorial readjustments cannot be determined out of hand. Governments and dynasties cannot be destroyed and replaced in a single operation. The vast and intricate war machine that has been built up cannot be taken apart immediately. Armies of tens of millions of men cannot be demobilized and returned to productive industry by a simple executive order. Ruined cities cannot be rebuilt without effort. Economic progress cannot be restored as quickly as it was arrested. Financial expedients cannot be abandoned as readily as they were called into being.

In view of the future trials and tests which the summaries that I have given indicate for the world, it will be judged that the process of getting back to normal is destined to involve supreme difficulties for the nations. Let us for a moment confine our thought to what confronts the United States. That our difficulties will be colossal will be accepted, I believe, without dispute. They will not be so colossal as the difficulties of the nations of Europe. Nor will they be of the same character. The United States was the last of the great powers to draw the sword and is the least weakened of the nations. But, paradoxical as it may sound, it is by very reason of our favorable position that some of our greatest problems will arise. All nations of the earth look hither to-day for their help and strength, and in satisfying their requirements we shall have imposed upon us not only great opportunities but vast responsibilities as well.

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The task of releasing the nation from its war tension and returning it to a basis where it will meet the requirements of ordinary affairs is one that will not be simple, nor easily within our power. It is in industry that the change from war conditions up to this time has been most visible and pronounced throughout the United States; hence the most pressing problems we face at the moment are industrial in their nature. Up to a few weeks ago all our thoughts and efforts, together with our tremendous forces of production, were devoted to the output of goods needful for the prosecution of the war. Those goods were so urgently in demand that our factories and labor were turning them out at a rate of forty to fifty million dollars a day. To-day those goods are no longer in demand, except in such quantities as may serve the United States army and navy on a peace basis.

We all want to look forward in the months immediately before us to a period of good times, with business in a vigorous, uplooking state. But can such a period be immediately ahead, while plants are being readjusted from a war-time to a peace-time basis, and while the world is still bewildered with the rapidity with which epochal events are occurring? The world's disorders of more than four years have drawn us far out of the beaten track of our lives, and it would seem that we could not, without a wrench, return to normal life as it was lived before the outbreak of the war.

An automobile speeding over a road at 60 miles an hour cannot make a right angle turn without slowing down, and industry in the United States can hardly be expected to make the turn into peace pursuits without very definite adjustments.

Roughly there are 8,000,000 war workers of one kind or another in the United States. There are more than 3,000,000 men in the army and navy. The mustering out of both the industrial war army and the military forces will be a gigantic task, and although those just now released are readily finding employment, none of us can be so sanguine as to expect that all the millions of men and women will be absorbed into peace-time industry promptly and at present wages and hours of employment.

However, it is not my purpose to say things here that will suggest that bankers generally are depressed and disquieted regarding the outlook. In all those seasons of depression and doubt which alternate with periods of optimism and confident assurance

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regarding the future, the fallibility of man's reasoning is made painfully apparent. On all big questions it has always been thus, and until experience has perfected human intelligence in all things, on big questions and little it will always be thus. In the present situation men's opinions differ widely and seasons of depression will lead to one kind of reasoning while seasons of enthusiasm will lead to quite another.

This present season ought not to be for any of us a season of depression. Concerning the outlook as it is to be scanned to-day, I will admit that one prospect appears to contradict another. That simply shows the complexity of the circumstances coming out of the war. I have said that all nations of the earth look hither to-day for their help and strength. And yet we must admit that the immediate future holds out to the United States two possibilities. On one hand, we must frankly admit that there is the possibility of an industrial setback. On the other hand we must recognize that there is the possibility of an industrial boom greater than has been seen at any time before.

One can argue plausibly for one prospect and logically for the other. Let us try it briefly. For instance, let us take the disquieting possibility first. The grounds for looking forward to an industrial setback may be briefly presented as follows:

1—Peace has deprived munition plants of a market which has been taking millions of dollars' worth of material daily. The war demand for shells, cartridges and guns will hereafter be as nothing by comparison with the recent demand.

2—The European nations, to re-establish themselves in the markets of the world, will henceforward use every means at their disposal to win back what they have lost since the middle of 1914. There will be a peremptory demand for the immediate employment of thirty million men released from fighting. The desire to plunge again into work to restore some of the appalling losses inflicted by the war disaster will be overwhelming.

3—Necessity for regaining lost commerce will lead to an effort to undersell American manufacturers, not only abroad, but here in our own home market. The assumption that the people of Europe will be so poverty-stricken that they will sell for anything conjures the picture of a whole continent making a united

effort to flood the markets of the outside world with merchandise, sold at prices against which American manufacturers cannot compete.

4—Poverty and tax burdens will be such that a tide of emigration will set in strongly to the United States, to disorganize conditions here. Many of the lower classes of central and south-eastern Europe would come now were there means of leaving the war-ridden countries. Means will be restored after peace is signed. Then we may expect a horde of people who for a long time cannot be assimilated and will consequently cause grave disturbance and dislocation of industry.

* * * * *

That is one side of the argument, the disturbing side, which you will note, sounds a dirge for American prosperity. Here is the other side: that which looks to the future with hope and confidence:

1—There is about to dawn in Europe an era of reconstruction and redevelopment on a scale never before witnessed in the history of the world. France, Belgium, Italy, Russia, Rumania, Serbia, Austria and Poland all have been invaded. All will need material to make good the ravages of war. In the part of France that was under German occupancy complete rehabilitation will be required. Belgium will have to be built all over again, industrially. Restoration of cities, factories, dwellings, bridges and warehouses elsewhere will require material beyond any present estimate. In every part of Europe the first duty will be to the restoration of the heart of industry and the arteries of commerce.

2—The United States is the only great industrial nation equipped with working forces, plant facilities and capital sufficient to turn out immediately what Europe will want at once. Orders must be placed with us for enormous quantities of raw material, for steel and iron and other metals, for lumber, grain, cotton, provisions and a thousand things with which to restore a continent to a semblance of its former self.

3—With able-bodied men pitifully reduced by loss of life and limb, Great Britain and the continental countries will not be able to command cheap labor and turn out cheap goods for export at a profit. Dependence upon the labor that remains will mean higher

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wages. Higher wages will at once cut off the advantage that was in other years a determining factor in establishing Europe in the world's export market.

4—Higher wages abroad will overcome the tendency of emigration to the United States.

* * * * *

Any man can measure one group of arguments against the other and come to one or another conclusion—whichever he desires. An industrial collapse or an industrial boom greater than any seen before—one extreme or the other may be selected as America's destiny.

My personal belief is that the answer will be determined by the urgency of Europe's need for our goods, plus the ability of the United States to extend credit to enable Europe to satisfy that need.

Temporarily we shall have a period of uncertainty, with wage readjustments and with, perhaps, a certain amount of unemployment. But that will be only temporarily. The whole world will presently be knocking at our door for material with which to reconstruct destroyed cities, railroads and factories. In satisfying the demands to be made we shall have the greatest opportunity ever placed before any industrial nation in the history of the world. The part to be played by the United States in the reconstruction period will be a dominating one.

Our new financial position, which will have much to do with bringing all this about, is already established. Since the outbreak of the war in 1914, the United States has shipped abroad 22 billion dollars' worth of food and manufactured materials and has imported only one-half as much. We have taken payment for nine-tenths of the balance in securities and notes. Is this not significant of what we are going to do in the future? England at the pinnacle of its financial fame never extended credit as we have done.

There are those who say that the United States, with development of its own resources making large demands upon capital, cannot for years to come be economically fitted to supply the world with capital. To them one need only point to the figures I have quoted, and to the credits the United States has placed in the hands of the Allies, since the war began. A little

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more than four years ago we were a debtor nation, heavily obligated to foreign lenders. Now we are a strong creditor nation. Something like three billion dollars' worth of American securities, previously owned abroad, was returned to this country before our entrance into the war, and in addition $1\frac{1}{4}$ billions of gold were sent in payment for our products, while $2\frac{1}{4}$ billions of foreign government loans were secured here. Since our entrance into the war upward of $8\frac{1}{2}$ billions have been borrowed here on foreign credits, directly from the government, and additional credits are being regularly extended by the United States treasury.

We have gained a financial independence never before experienced. We have canceled our European debt while Europe has piled up her debt with us. Equipped with an elastic currency system, the part to be played by the United States in the reconstruction period will, it is my firm conviction, be a dominating one. The extraordinary showing of power in face of the political and economic convulsion of the past four years has given the United States a new financial prestige, and our strategic position, economically and commercially, will be stronger with each month that elapses after the close of the war. Our leading men of affairs are thoroughly alive to what is before them. It is for the rest of us to do some right thinking and right planning.

The war, I believe, has been the making of the American nation. Events and developments since it began have been tremendous, and there is promise of much more. A little while ago we reckoned our accounts in hundreds of thousands and in millions. Now we are reckoning in units of billions. We have ceased to think within the limits of sections or even of our own continent: we have come to regard the world as the scope for our sympathies and the field for our enterprise, while all humanity has become the rightful object for our planning.

America is to-day the world's unconquered hope. The war opened to our vision a new glory and greatness and power. It saved us from losing our head in the whirlpool into which we were tossed; it brought us up with a sharp turn and we shall now maintain the efficiency of which we are capable.

We frequently heard it said, before April, 1917, that we were inviting the wrath and hatred of the people of Europe by our cold-hearted indifference to the suffering of the war-stricken countries. If there was danger of that, that danger was removed

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when we took our rightful place in the war. We have now shown the world the scope of our wonderful resources and the intensity of our application to the project of a war for humanity. We will henceforward show how capable we are as a nation to apply those same resources to the project of upbuilding the structures of humanity.

Let us admit that there will be a selfish motive in all that we do. We need not be ashamed to do that. We shall prosper as nations abroad, that are our customers, prosper. But remember this: we ourselves cannot prosper if it is our ambition and purpose to take every possible advantage of other nations, not so well off as ourselves, in a ruthless manner. Nations over-sea will not be beggars of the United States in any sense of the word. They will be customers. And the degree in which the United States shall become a nation of world tradesmen and world bankers will be determined by the manner in which we grasp the opportunity of treating others not as beggars but as respectable customers and purchasers of our goods.

The manufacturer, the merchant, the export commission broker, the banker, the transportation man, the producer from the soil, the miner—aye, the accountant as well—all these must alike look forward to deriving a benefit upon the conclusion of peace—not only a personal benefit, nor even a national benefit, but an international and world benefit.

Foreign purchases in the United States of the future, more than ever of the past, will be paid for with credit. Shipment of gold hither in exchange for goods will be made only in so far as we command that shipment by the refusal of credit, and will be limited in any case. Means of immediate payment for all that Europe requires will be lacking, and, if there is no substitute for that means, we know that purchases will have to be curtailed. If Europe, which is and must for many years to come be our chief customer, curtails its purchases, our trade will languish, men who are employed will lose their work and prosperity will give way to hard times. Just as we cannot forever count upon a prosperity that springs from the calamity of other people, so we cannot count upon taking advantage of that calamity. If we are to have growing commercial relations with the rest of the world, we must cast aside insular habits and prejudices, and provide the rest of the world with the means of paying for

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products bought from us. We must accept promises to pay, and grant easy terms. We must accept as collateral the character, integrity, industry and skill of the people with whom we trade.

In that way only, by earnest, willing co-operation, shall we grasp firmly the great opportunity that is before us.

Outline of a Cost Accounting System for a Wooden Ship Yard

By FREDERICK W. DAVIS

Employ your time in improving yourself by other men's documents; so shall you come easily by what other men have labored hard for.—Socrates.

The writer has had twenty-five years' experience as an accountant and during the past year and a half has done a great deal of war work cost accounting in several large plants in various parts of the country. His work has taken him into two ship yards: one at Camden, N. J., where steel ships are being produced, the other on the Jersey meadows where ten wooden hulls of a uniform type were constructed. This type is known as the "Ferris hull," of an estimated dead weight of 3,500 tons, 281 feet, 6 inches in length and 46 feet beam over planking.

The cost accounting system hereinafter outlined while primarily intended for use in wood ship yards can also be used, with modifications, in steel ship yards.

As the ship-building industry bids fair to be one of the most important throughout the world for the next decade the writer feels that an article on the subject at this time may be useful to many cost accountants, particularly in this country. The system outlined in the following pages is in accordance with the views of the Emergency Fleet and United States government accountants, as the writer interprets them, and he does not claim to be its originator. He regrets that lack of space in this magazine prevents the publishing of all the forms which should accompany the article.


The question as to which is the more efficient of the two types, the steel or the wooden hull, is an interesting one and has precipitated more than one row in Washington. The general impression gained by the writer is that there is need for both types in this country, the wooden hulls of 3,500 tons burden or thereabout being especially adapted for coastwise trade and our commerce with South America and Canada. Tug-boats and barges can be constructed more economically from wood than from steel and seem to stand up better for the work for which they are intended. It has been found by experience that it is impractic-


able to build wooden hulls, equipped with propellers, of more than 4,000 or 5,000 tons burden, for the purpose of crossing the ocean, as the hulls cannot stand the pounding of the screws as well as the steel ships. It costs about as much to operate a 3,500 ton vessel as it does to operate one of 5,000 tons or more carrying capacity. The speed of the steel ship is much greater than that of the wooden one and time is frequently the essence of contracts.

Old and experienced shipbuilders have told the writer that a well constructed wooden hull is apt to last for 50 years of service, barring accident, while it is doubtful if steel hulls will last that length of time. The cost of raw material is greater in steel ships than in wooden. In these days of high freight rates the writer believes it to be impracticable to maintain wooden ship yards at any great distance from the source of supplies. There are four districts in this country which are eminently suitable for wooden ship building, viz. the states of Maine, Georgia and Washington and the great lakes district.

This great question is beyond the province of the accountant and must be settled by the authorities of the United States shipping board, their engineers and superintendents.

Too much stress cannot be laid upon the value of a technical knowledge of any business upon which the cost accountant may be engaged. The average public accountant knows very little about cost work in a ship yard unless he has been engaged in such work. If he desires to obtain a practical knowledge regarding wooden shipbuilding he is recommended to secure the following named works:

 *How Wooden Ships are Made* by H. Coles Estep, former editor of the *Marine Review*, published by the Penton Publishing Co. of Cleveland, Ohio.

 *A Practical Course in Wooden Boat and Shipbuilding* by Richard Van Gaasbeek, published by F. J. Drake, of Chicago. The latter contains many photographs of the yard in which the writer is at present employed.

The only work on shipbuilding accounting that the writer has been able to discover thus far is a small volume entitled: *Engineers' and Shipbuilders' Accounts* by Francis G. Burton, being volume XIV of *The Accountant's Library*, an English work published by Gee & Co. of London, 1911. This may be re-

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garded by many as being somewhat out of date at this time, but will well repay a careful study. As the book is difficult to obtain on this side of the water the writer takes the liberty of making an extract which will give the reader some idea of the style in which the book is written:

Professor Dicksee, in his *Bookkeeping for Accountant Students*, says two objects have to be arrived at:

(1) That the record be so explicit that, at any subsequent time, the exact nature of the transaction may be readily perceived without the aid of memory.

(2) That the transactions should be so classified that at any time the total result of such transactions during any given period may be readily ascertained.

The business of a shipbuilder or engineer presents peculiar difficulties in this respect. Within the same yard there are numerous different trades—shipwrights, millwrights, blacksmiths, moulders, machinists, platers and rivetters, fitters, joiners, pattern makers, painters, &c. The cost and value of the work of each of these trades must, in some way or other, be ascertained, whilst at the same time a record must be kept of the cost of each contract, and sometimes of sectional portions of contracts. It will readily be perceived that such conditions demand modification of the nominal accounts in the financial books and the provision of special statistical or memorandum books. In well regulated engineering firms elaborate cost accounts are kept; in nearly all some attempt is made to ascertain the prime cost of work executed; but, alike in the more elaborate and the less pretentious cost bookkeeping, misleading errors frequently arise through an imperfect system and an improper allocation of establishment charges being pursued. This is particularly unfortunate, because of the many purposes for which such accounts are used. Although it may appear paradoxical to the shareholder or the auditor, it is, nevertheless, perfectly true that the superintending engineer makes far more use in the management of his business of such cost accounts as he may possess than he does of his nominal ledger or other financial books. The reason is not far to seek. Whilst a textile manufacturer or textile merchant is guided and limited in his transactions by his immediate market (which market is a definite price for a definite article), the engineer has to consider a number of complex factors extending over a long period, which, at best, are only partially represented in his trading account—a fluctuating market for materials; the existence of patterns or the cost of making them; the prospect of labor troubles; the extent of purchases of finished materials which will have to be made; and the time and machinery which will be occupied in the constructions. Some of the tenders he is asked for have to be rendered within a very limited time, and if he can readily consult the records of previous similar (or analogous) structures, the task of fixing his tender price will be considerably lightened. Again, after the contract is signed, it is desirable to compare the progress of actual cost with the detailed estimate, so that expenditure which is progressing on certain portions at an undue rate may be curtailed, or a more liberal interpretation given to other portions of the specification on which profits are accruing greater than those anticipated. In some constructions, like that of a large ocean steamship, there is generally a margin on such items as cabin fittings, stores and spare gear; whilst the alteration of any portion of the specification (a frequent incident in shipbuilding) invariably affords opportunity for a little extra profit.

To shipbuilders and engineers, in these competitive days, cost accounts are indeed not a luxury, but a necessity.

It is most desirable that the accounts of a shipbuilding company should be so arranged as to afford an analysis of the cost of the completed ships. It is bad business to plunge blindly into the construction of a number of ships of a single model, without making some provision beforehand for checking up the cost estimates on the ships, or without arranging matters so that the costs of the ships may be watched and compared as the work progresses. A shipbuilder is not getting proper efficiency out of his accounting department if he has to wait until a ship has been completed and delivered to find out whether he has run above or below his cost estimate; and if, on the completion of ship No. 2 he finds that it has cost more to build than ship No. 1, the knowledge will not be of any use to him unless he can put his finger on the part of the ship where the costs ran high, and then take steps to find out why they were excessive. On the other hand, if he can know, from time to time during the construction of ship No. 2, that it is costing more than it should, he can take steps to trace the cause of trouble and correct it in time to save money and avoid a loss that otherwise would not even have been known about until the ship was completed.

The process of constructing ships may be analyzed in many different ways, and most of the analyses are reasonable and justifiable, in that they are laid out to tell the man who is running the business what he wants to know. Some of them are not always logical, however; and since they have not been laid out on any uniform basis, the results are not of very much value for comparative purposes. Some conditions require a more minute analysis than others; therefore the problem has been to work out a primary cost analysis that would fit all conditions and requirements, and to supplement that by provision for a secondary analysis for use when required.

The main construction analysis submitted herewith has been worked out in consultation with experienced shipbuilders and accountants; and it is believed that it presents a thoroughly practical basis for uniform cost accounting in shipbuilding. From start to finish, the main construction analysis has been worked out strictly on a basis of structural units. It is proposed for instance, that the planking account shall be charged, not only with the cost of putting on the planking, but also with cost of caulking it and painting it, with any necessary dubbing on planking,

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and with the cost of scaffolding, etc., required in planking operations. If a simple, inexpensive analysis is desired, the main construction accounts only need be used, and all labor and material charges can be posted to them in lump sums. If it is desired to make further analyses of the labor and material charges, or either of them, the secondary analyses may be used. It is recommended that, in either case a separate account be opened in a subsidiary ledger for each of the main construction accounts, and all charges thereto be posted, either in lump sum or in detail as may be required. A controlling account for the construction accounts of each ship should be carried in the general ledger. When the work on any section of the ship has been completed, the construction account on that section of the ship may be closed, thereby giving the cost of that section. When the labor and material analyses are used, postings should be in terms of quantities as well as of money, so that a recapitulation of the finished account will show the number of hours of each class of labor and the quantity of each kind of material that went into that section of the ship. Overhead expense, however analyzed, should be accumulated in the special accounts and distributed from them to the cost of the ships under construction.

MAIN CONSTRUCTION ACCOUNTS

As stated above, the main construction accounts are based on an analysis of the progress of the construction of the ship. Each account is supposed to accumulate all items of cost or expense entering into that section of the ship. The account for engines and boilers for instance, will include purchase price of engines and boilers, delivered at the ship, and the cost of installing them, including labor, supplies, spare parts and everything else necessary to complete installation of the engines and boilers in running condition. An account is provided for undistributed direct expense, but this account should only be used when it is absolutely impracticable to charge the expense elsewhere. Each account is numbered, in order to facilitate the work of distribution. Four figure numbers, running in even hundreds, have been assigned, so that the main account numbers may be combined when desired with the two figure numbers that have been given to labor and material analysis accounts.

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As an illustration of the application of this numbering system, fastener labor on square frames would be charged to account 1258 and fastener labor on the cant frames to account 1358. Treenails for the square frames would be charged to account 1285 and treenails for the deck framing would go against account 1685, in the material accounts.

- 1000 Proportion of moulding cost. If it is proposed to build ten ships of the same model, the cost of making moulds should be distributed equally to the construction costs of these ten ships.
- 1100 Keel.
- 1200 Square frames.
- 1300 Stem and stern posts, cant frames, keelsons and deadwood.
- 1400 Steel strapping and other steel reinforcement of top, sides and deck.
- 1500 Ceiling.
- 1600 Deck framing, main deck, including all stanchions, deck clamps, knees, shelves, waterways, deck beams, hold beams, hatches, hatch coamings and covers up to top line of main deck.
- 1700 Engine and boiler foundations, including shaft logs and foundation for engine room auxiliaries.
- 1800 Foundations for winches and other deck auxiliaries.
- 1900 Planking, rails and bulwarks.
- 2000 Bulkheads.
- 2100 Decking. Upper and between deck.
- 2200 Deck superstructure, including all structures above upper deck and forecastle, boat and poop decks. Does not include plumbing or electrical lighting.
- 2300 Rudder.
- 2400 Spars, booms, rigging and lines.
- 2500 Tanks.
- 2600 Engines and boilers, condensers and cooling system, dynamos, all engine room auxiliaries and engine room piping up to engine room bulkheads.
- 2700 Deck auxiliaries, such as winches, capstans, steering gear, cargo gear, anchors, anchor hoists, bits, chocks, etc.
- 2800 Plumbing, heating, fire protection and water systems.
- 2900 Electrical equipment. Switchboards, wiring, lighting, fixtures, etc.

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- 3000 Launching.
- 3100 Trial trip and delivery.
- 3200 U. S. inspection outfit. Life-saving and navigating equipment.
- 3300 Cabin furnishings and steward equipment.
- 3400 Prorated overhead. See overhead analysis.
- 3500 Prorated depreciation. See overhead analysis.
- 3600 Propeller, shaft and accessories.
- 3700 Undistributed direct expense. Ship and casualty insurance, wages of general foreman and other employees on a specific ship, whose time cannot be charged to any particular section thereof, and similar undistributable direct expense.

SECONDARY ANALYSES—LABOR AND MATERIAL

Even when secondary analyses are not used, they should be carefully studied, as they form a guide as to what constitutes direct labor and material, which is directly chargeable to the construction cost of ship, as compared with the indirect labor and material, which are to be charged to the overhead expense. It should also be noted that the same man may form both direct and indirect labor, and that material should be classed as direct or indirect according to the way it is used. If a carpenter is working on a frame of a ship, his labor is direct. If he is mending a fence around the ship yard, his labor is indirect and is chargeable to proper overhead account. If he is helping to erect a new building, his labor is chargeable to the property accounts of the company.

A blacksmith who is making a special fastening for some particular ship is doing direct labor; but if he were making bolts, to be carried in stock until they are needed for some ship or other, his labor should be charged to the inventory account in which the unfinished bolts are to be carried. Nails or lumber used in erecting scaffolding around a ship are direct material, but if the same nails or lumber were used in repairing a fence, they would be indirect material and would be chargeable to overhead.

The purpose of the secondary analyses is to provide an analysis of the cost of each section of the ship, in the same way that the purpose of the main construction analysis was to provide an analysis of the cost of the ship as a whole. If the management of the business wants to know the cost and total hours of each

class of labor that went into the square frames, or the cost and quantities of each class of material and fastening that went into the engine and boiler foundations, this information may be obtained by the use of the secondary analyses.

LABOR ANALYSIS

Foremen and helpers are to be charged, wherever possible, to the same accounts with the journeymen of the trade in which they are working. Whenever it is impossible to analyze direct labor into the various other groups provided under the main construction accounts, it may be included in group 3700, undistributed direct expense, but, needless to say, the charges to this account should be kept as small as possible. If trades other than those enumerated below are regularly employed, they may be charged to account 70, unclassified direct labor, or new account numbers may be set up to take care of them.

- 51 Blacksmith.
- 52 Carpenter.
- 53 Caulker.
- 54 Donkeyman.
- 55 Dubber.
- 56 Electrician.
- 57 Engineer.
- 58 Fastener.
- 59 Joiner.
- 60 Laborer.
- 61 Layoutman.
- 62 Machinist.
- 63 Mould loft man.
- 64 Painter.
- 65 Pipefitter.
- 66 Planker.
- 67 Rigger.
- 68 Sawyer.
- 69 Watchman (not to include
general yard watchman).
- 70 Unclassified direct labor
(general foremen, water-
boys, sweepers, etc.).
- 71 Teams and teamsters.
- 72 Dockbuilders.

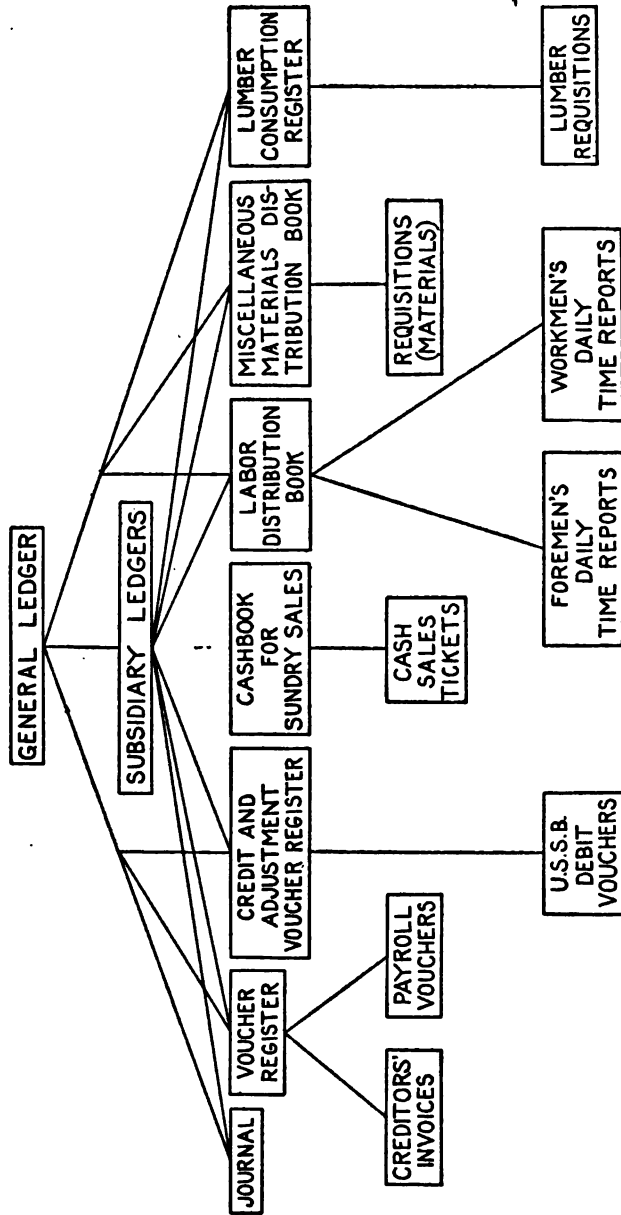
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MATERIAL ANALYSIS

- 80 Timbers and planking for braces, scaffolding, etc. This account should be credited with salvage value of any material taken back into stock or transferred to another ship, but it is not recommended that any track be kept in the accounts of materials issued for use in one section of a ship and later used in some other section.
- 81 Fastenings for braces, scaffolding, etc. See note above.
- 82 Timbers and planking for ship construction.
- 83 Knees.
- 84 Flat and structural steel for strapping and braces.
- 85 Treenails.
- 86 Iron and other metal fastenings, spikes, bolts, etc.
- 87 Forged and cast fittings, iron and steel pipe and fittings.
- 88 Brass and bronze fittings.
- 89 Lead pipe and sheet lead.
- 90 Paints and varnishes.
- 91 Tar and wood preservatives.
- 92 Oakum and other caulking materials.
- 93 Rope and cable.
- 94 Mechanical equipment, inspection outfit and other purchased appurtenances.
- 95 Small construction supplies. Solder, cement, salt, etc.
- 96 Scrap lumber. This account should be credited with sale or fuel value of scrap lumber, produced in sawing out frames and other structural parts of the ship, and taken into inventory for sale or used as fuel.
- 97 Scrap iron, brass, miscellaneous metals, etc.

It will be a good plan to lay out the inventory controlling accounts in accordance with the above material classification, even to the extent of having a separate inventory control for each class of material. An analysis of stocks on hand and of inventory turnovers, laid out on the same basis as the grouping of the charges to construction costs, should be extremely valuable to the manager and the purchasing agent, and this additional detail of the work would not be difficult to carry out.

CHART SHOWING RELATIONSHIP BETWEEN THE BOOKS OF SUGGESTED COST ACCOUNTING SYSTEM,
ALSO THE SOURCE.



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OVERHEAD ANALYSIS

In submitting the following accounts for the analysis of overhead expenses, it is proposed that a separate ledger account be opened for each item. The primary purpose of the accounts here outlined is to provide designations and definitions of the various groups into which the overhead expense must be divided, so that the postings to the various ledger accounts for overhead expense may be worded in such a way as to provide for a recapitulation and itemized statement of overhead expense at the end of each month. An attempt has been made to provide a more or less comprehensive description of the various items chargeable to each account, but the writer does not pretend to have enumerated everything that is chargeable to each of the overhead classifications. The proper handling of the detailed distribution must depend on the judgment and intelligence of the bookkeepers and cost accountants.

1. Administrative salaries:
Salaries of president, vice-president, secretary, treasurer, assistant secretary, assistant treasurer, purchasing agent, works manager and superintendent.
2. Office and operating salaries:
Salaries or wage of clerks, foremen, stenographers, time-keepers, watchman, and other indirect labor at ship yard, excepting labor specified to be charged to other overhead charges.
3. Outside office expense:
Expense of any office maintained by the company outside of the office at the ship yard.
4. Plant office expense:
Stationery, office supplies, blue prints, postage, telephone and telegraph and other office expenses.
5. Traveling and entertaining:
All expenses in the way of fares, berths, hotel accommodation, meals, etc., of officers or employees of the company, traveling on company business, and any necessary entertaining in connection with the administration of the business or the operation of the yard. Note: No traveling or entertainment expense in connection with the possible sale of

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ships to outside customers may be charged to this account, as they are proper charges to selling expense.

6. Depreciation of furniture and fixtures:
This account will be charged monthly with one-twelfth of the annual depreciation allowance provided for office furniture and fixtures.
7. Labor and material in maintenance:
All labor, materials and supplies used in maintaining in good condition the buildings, walks, fences, roadways, sewers, lighting systems and other fixed improvements on ship yard property.
8. Labor and material in repairs:
All labor, material, supplies used in repairs to machinery, air and electric tools and in keeping machinery in good condition.
9. Lubricants and waste:
All oils, greases, belt dressings, wiping waste and similar materials used in connection with the operation of all machinery in the plant.
10. Small tools (perishable):
All hand tools, drill or auger bits, saw blades, etc., will be carried in stores until actually required for use, when they will be issued to the tool room, or other proper department, and charged off to this account. This account will also be charged with any labor, material or supplies used in making or repairing small tools, and keeping them in good condition.
11. Store expense:
This account will be charged with the salaries or wages of storekeepers, tool and material clerks and other employees engaged in handling inventories of tools. It will also be charged with supplies used in stores department, transportation charges that cannot be applied directly against the commodities on which they are paid, and with any ordinary stores shortages. Any overcharges in stores will be credited to this account.
12. Automobile, team and launch expense:
Any expenses, which cannot be charged direct to stores expense or elsewhere in the accounts, in connection with the operation of company automobiles, trucks, teams or launches.

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13. Heat, light, power and water :
All payments for purchased heat, light, power and water ; cost of fuel and other special supplies used in power plants and wages of power plant employees, maintenance and repairs.
14. General insurance :
All insurance premiums which cannot be written off to the cost of a specific ship will be written off to this account in equal monthly instalments during the life of the policy.
15. Taxes :
This account may be charged only with taxes actually paid.
16. Ground rental :
Authorized payments for rental of property occupied by ship yard.
17. Other rentals. Tugs, derricks, etc.
18. First aid supplies and expenses, doctors' salaries, assistants, etc.
19. Dock rental :
Any periodic payments authorized to be made for use of dock facilities. If dockage charges are calculated at a flat rate per ship per day, such charges will go against the construction cost of the ship incurring them and will not be taken into overhead.
20. Exchange and discount :
This account will cover items of bank exchange and discount, incurred in the ordinary course of business, but will not include any interest on loans or discounts on purchases, for which separate accounts have been provided.
21. Extraordinary losses :
This account will be charged with losses due to fire, flood, storm, riot, vandalism, act of God, act of war, other casualties, which are not compensated by insurance or otherwise and cannot be charged direct to the construction account of a specific ship.
22. Depreciation of plant :
This account will be charged monthly with one-twelfth of the authorized annual depreciation rate, applied to the cor-

rect net book value of plant and plant equipment at the close of that month.

23. Interest paid on loans:

This account will be charged with any interest paid on loans and credited with any interest received on bank balances, or otherwise for the use of company's funds.

24. Discount received on purchases.

25. Selling expense:

This account will be charged with all compensation and expenses of employees whose sole or principal work has to do with the sale of ships to private owners, and with all expenses for advertising, except advertising for help, which may be charged to plant office expense.

DISTRIBUTION OF OVERHEAD EXPENSES

The balance in accounts 1 to 21 shall be closed off monthly to the construction costs of all ships under construction or repair during the month, on a basis of the direct labor charged to each of such ships during the month.

The monthly charge to account 22 will be distributed to the cost of all ships that have been on the ways during the month. In calculating the proportion to be charged to each ship, the number of days that each ship has been on the ways during the month will be added up, and the total days on the ways for the month will be divided into the depreciation charge for the month. This will give depreciation charge per day on the ways, which shall then be applied to the construction cost of each ship on the basis of the number of days it has stood on the ways during the month.

The question of depreciation becomes extremely involved where loose, perishable tools are concerned, particularly in ship yards where strict supervision is more difficult than in the ordinary factory confined within walls. Electrical and air-driven tools which can be easily moved from place to place complicate the situation. They are rapidly worn away, many are broken by the carelessness of green operators and a very high rate of depreciation must be given annually to cover the loss. It is impracticable to keep individual records of these tools and an average percentage of loss must be adopted. The tools may be

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divided into classes and the percentage for each determined by competent experts.

The writer does not claim to have covered the entire ground in the foregoing pages. He believes, however, that the suggestions therein contained will be found helpful and lead other cost accountants to give their views.

Each shipyard is an individual city by itself and each will require special treatment in many important and minor details.

Practical Interpolation

BY ARTHUR S. LITTLE.

To have in one volume sufficient matter to cover all the possible results which investors or bankers may desire would require a volume beside which the family Bible of old would pale into insignificance the fact, however, that a book does not give every result sought for need not deter the user thereof from making some attempt to secure the result desired by a simple use of mathematics Suppose that it is desired to find a price at which it will net the holder 4.05%. The nearest results in the table here given are 4% & 4.10% add them together and divide by 2, and the result, near enough for all practical purposes, will be obtained. There will, however, be a very slight inaccuracy.

MONTGOMERY ROLLINS.*

Nearly every one, regardless of what he may or may not know of analytical geometry, fully understands the familiar device of furnishing illustrated statistics through the means of geometrical figures. The "curve of the cost of living" is a well-known example, and in a similar manner are shown stock market fluctuations, river stages, consumption of fuel, etc.

Charts of the character just referred to are, however, essentially historical in their nature, being based upon accomplished and known facts, and, no matter how great an epoch may be covered, very little reliance is to be placed upon results obtained from attempting to prolong the curve in either direction in order to read the future or unrecorded past.

But the case is entirely different when we come to illustrate numerical values, either abstract or concrete and involving time, space or matter, provided that the values depicted progress in accordance with some fixed inflexible law, however complex it may be, for in such instances the systematic law and order under which the numerical quantities are mutually interdependent is faithfully reflected in the geometrical design, and the result is invariably either a straight or a curved line (always the latter unless the "law" be extremely simple) which requires nothing more than plain eyesight and common sense to determine that it is "symmetrical," thus suggesting at once that it is at least theoretically possible, by prolonging the curve under its own plan of curvature, to obtain quickly and accurately, through the aid of draftmen's tools alone, an indefinite number of additional functions in the same category as the limited number originally at hand.

**Annals of the American Academy*, September, 1907, p. 52.

Practical Interpolation

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The brief chapter on interpolation in Sprague's *Accountancy of Investment*, while excellent as far as it goes, is by no means as complete as it might and should be, and the student is left almost entirely in the dark as to how to proceed in attempting to work with series of a different type from that employed in the single example given.

The orthodox definition of a series is: "A number of terms; each of which is derived from one or more of the preceding terms according to some determinate law."* Practically all the mathematical tables employed by accountants, bond dealers, astronomers, engineers, etc., are a perfect type of series as just defined, and notwithstanding the diversified nature of such tables and the various more or less complex laws governing their construction, if they be drawn to scale on profile paper it will be found that only three geometrical forms are produced, viz:

- (a) (b) a straight line,
- (c) (d) a concave curved line,
- (e) (f) a convex curved line,

depicting respectively series whose successive terms possess the following mathematical properties:

- (a) (b) Increasing/decreasing at a uniform rate.

Examples: A simple interest table.

Bond values at different equi-distant coupon rates.

- (c) An increasing increase.

Examples: Growth of a single sum at compound interest.

Amount of an annuity.

Natural tangents and secants.

- (d) Taken in opposite direction.

- (d) A decreasing decrease.

Examples: (c) Taken in opposite direction.

Bond values (below par) by time units.

Bond values by income rates.

Reciprocals of natural numbers.

Present worths of a single sum.

- (e) A decreasing increase.

*Joseph Ray.

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Examples: Bond values (above par) by time units.

Present worth of an annuity.

Logarithms.

Natural sines.

(f) Taken in opposite direction.

(f) An increasing decrease.

Examples: (e) Taken in opposite direction.

(I am unable to think of any tables in common use that come under this head, although they doubtless exist in connection with certain subjects—e. g., astronomy and ordnance.)

If these six types be "differenced out" the following laws will be found to prevail:

(a) (b) No second difference.

(c) First difference negative, and thereafter signs alternately plus and minus.

(d) Differences all positive.

(e) Differences all negative.

(f) First difference positive, and thereafter alternately minus and plus.

Most of the ordinary mathematical tables are of the types (c), (d) and (e), and if the series be extended indefinitely it becomes evident, upon investigation, that the curve thus prolonged is steadily lengthening and approaching the limit of a straight line, to be attained at infinity. This ultimate straight line is:

(c) Perpendicular to the base,

(d) Coincident with the base,

(e) Parallel to the base.

An interesting example of the latter is afforded by a chain of values for, say, a 5% bond to yield 4%. At 50 years the value of the ordinate is 121.55; at 100 years 124.52 and will be 124.99 within a reasonable time, but eternity is required to bring it up to the limit of 125.

There are some types of series, however, which by their nature have a definite beginning and ending and cannot be extended indefinitely. For example, the natural tangents of the quadrant start with 0; reach 1 at 45° ; 573 at $89^\circ.9$ and through the remaining 6 minutes of the arc increase at a frightful rate from the aforesaid 573 to infinity!

Practical Interpolation

The natural sines furnish an example of a curve of the (e) type which cannot be prolonged indefinitely. Another good instance is afforded by the second difference factors in the accompanying table. In view of the behavior of the curve in the case of compound interest tables, reciprocals, logarithms, etc., it would scarcely seem possible that a curve which reaches a peak and then retrogrades and reproduces itself in a contrary direction could be governed by any self-contained "law;" nevertheless such is the case. For instance, if we take the natural sines:

70°	939,693
75°	965,926
80°	984,808
85°	996,195
90°	1,000,000

and attempt to obtain the 6th term (95°) by extrapolation, we obtain 996,195, which is correct. Mathematical notice or warning that the curve is about to pass a peak is afforded by the second difference becoming greater than the first difference on which it bears, and the passing of the peak is indicated by a change of signs in the first difference.

If bond values for 3%, 4%, 5%, 6% and 7% bonds running, say, 20 years and yielding 4% be calculated and drawn to scale we will obtain a curve of the (a)-(b) type as shown in figure I. If,

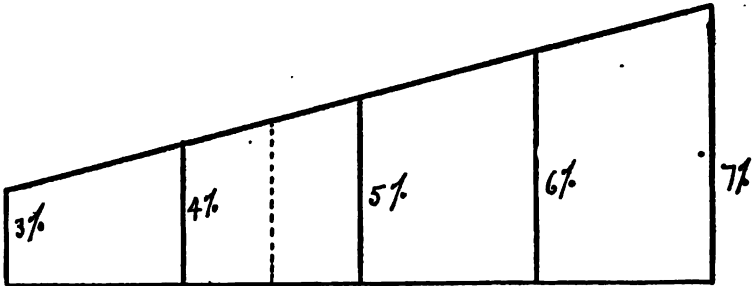


FIGURE I

now, it is desired to obtain (without independent calculation) the corresponding value for $4\frac{1}{2}\%$, it is evident that no error whatever will ensue from "adding together the 4% and 5% values and dividing by 2" as it is merely an application of the geometrical principle that the median of a trapezoid is equal to half the sum of the bases. But if we attempt, in a similar manner, to insert a

13½ years' value for a 4% bond to yield 7% between given values for 1 year and 26 years we obtain 80.73 instead of the correct value of 74.07. If the basis be 3% we obtain 109.47 instead of the correct value of 111.03. These respective errors (in excess on prices below par and in defect on prices above par) are indicated by HS in figures II and III and represent, in principle, the unsoundness of the common practice of bond dealers whereby serial bonds are negotiated at one price based upon the "average life."

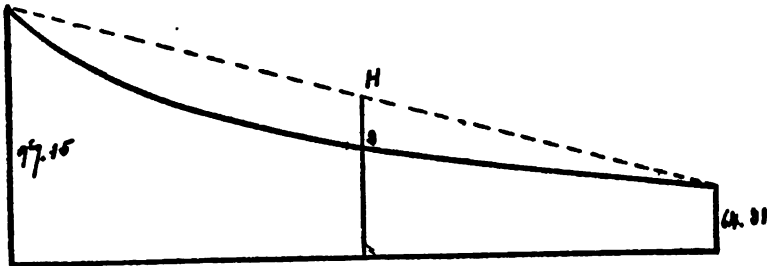


FIGURE II

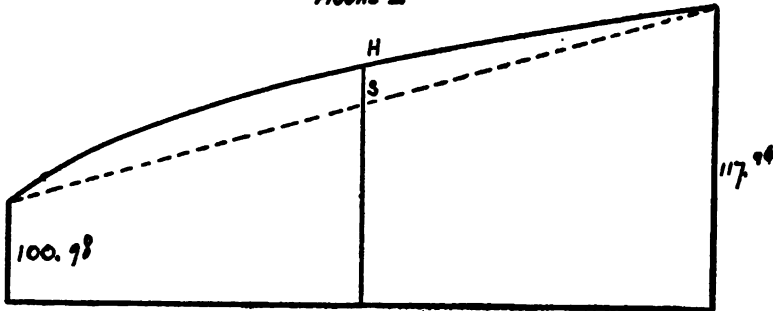


FIGURE III

Notwithstanding that there are, as we have noted, at least seven types of series to be found in ordinary mathematical tables, the actual process of interpolation in practical every day work is very much simpler than any one would ever suppose from reading anything on the subject in existence which I have yet seen in college algebras and other mathematical treatises.

The general method or rule, applicable to all cases, is as follows:

Set down in a vertical column a sufficient number of equi-distant terms, commencing with the pair between which lies the function sought.

Practical Interpolation

Subtract each term in the column from the term immediately above it until an adjacent column is built up containing one less item.

In a similar manner subtract each item in column II from the item immediately above, building up a third column containing two less items than the first. Continue in this manner until a column is obtained whose items are all equal, or practically so.* Then take the first term in the original column and subtract therefrom such portions of the first item in the 2nd, 3rd, 4th, etc. columns as are called for by the accompanying table for the interval desired.

This is all there is to it, except of course that "subtracting" is to be done throughout in an algebraic sense, and due care must be exercised with regard to signs.

EXAMPLE I.

Find a 4.136% basis for $27\frac{1}{2}$ year 5s.

4.10%	1,147,609.83			
4.15%	1,138,627.44	8,982,39		
4.20%	1,129,743.17	8,884,27	98,12	
4.25%	1,120,955.82	8,787,35	96,92	1,20
4.30%	1,112,264.20	8,691,62	95,73	1,19
	8,982,39 x .72	6,467.32,1†		
	98.12 x .1008	9,89,0		
	1.20 x .043	5,2		

Total correction 6,477,26,3

1,147,609.83

6,477.26

1,141,132.57

For verification purposes there are two methods that can generally be conveniently employed, either of which is much better than the very poor plan of going over one's own figures.

First method: repeat the operation, taking a different interval in the 1st column.

*"The extent to which the last column of differences may be allowed to waver will be learned by experience."—*Sprague*.

†To obtain the full degree of accuracy in final figures, work should be carried to one spare column in this manner.

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4.10%	1,147,609.83					
4.20%	1,129,743.17	17,866.66				
4.30%	1,112,264.20	17,478.97	387.69			
4.40%	1,095,163.44	17,100.76	378.21	9.48		
4.50%	1,078,431.64	16,731.80	368.96	9.25	.23	
4.60%	1,062,059.79	16,371.85	359.95	9.01	.24	
	17,866.66 x .36	6,431.99,8				
	387.69 x .1152	44.66,2				
	9.48 x .063	.59,7				
	.23 x .042	1,0	1,147,609.83			
			6,477.27			
			<hr/>			
			6,477.26,7			
			<hr/>			
				1,141,132.56		

Note that this time we obtain one more order of differences than at first. To generalize: the closer the interval between the equi-distant terms in the 1st column, the simpler the calculation.

Second method: reverse the order of the terms.

4.15%	1,138,627.44					
4.10%	1,147,609.83	—8,982.39				
4.05%	1,156,691.59	—9,081.76	99.37			
4.00%	1,165,873.94	—9,182.35	100.59	—1.22		
3.95%	1,175,158.15	—9,284.21	101.86	—1.27	.05	
	—8,982.39 x .28	—2,515.06,9				
	99.37 x .1008	10.01,6				
	—1.22 x .0578	—7,1				
		<hr/>				
		—2,505.12,4				
			1,138,627.44			
			—2,505.12			
			<hr/>			
				1,141,132.56		

EXAMPLE II

Find the logarithm of 1.0196.

10195	008,587,230,114,159					
10200	008,600,171,761,918	—212,941,647,759				
10205	008,813,009,052,089	—212,837,290,171	—104,357,588			
10210	009,025,742,086,910	—212,733,034,821	—104,255,350	—102,238		
10215	009,238,370,968,466	—212,628,881,556	—104,153,265	—102,085	—153	
10220	009,450,895,798,694	—212,524,830,228	—104,051,328	—101,937	—148	

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EXAMPLE IV

Find a 4.45% basis for 4s, 97½ years to run.

100	900,116.42								
95	900,421.66	99,694.76							
90	900,802.03	99,619.63	75.13						
85	901,276.02	99,526.01	93.62	981.51					
80	901,866.70	99,409.32	116.69	976.93	4.58				
75	902,602.76	99,263.94	145.38	971.31	5.62	98.96			
70	903,520.02	99,082.74	181.20	964.18	7.13	98.49	.47		
<hr/>									
	—305.24 x .5	—152.62,0							
	75.13 x .125	9.39,1							
	—18.49 x .0625	—1.15,6		900,116,42					
	4.58 x .03906	17,9		144,22					
	—1.04 x .0273	—2,8							
	.47 x .0205	.9		900,260,64					
<hr/>									
			144.22,5						

By this method, regardless of the class of the curve and the relative numerical value of the terms and their orders of differences, we always subtract from the item immediately above in the manner just shown, despite what schoolboys might think. In performing this impossible subtraction it is well (although not necessary) to work with red ink, but in any case at least one prefixing nine should be written into the work. The differences in such columns are of course negative, and the arithmetical complement is to be taken for use with the correction factors. Such arithmetical complements are easily read off by inspection—subtracting each digit from 9 until the last on the right is reached, which is subtracted from 10. As shown by the last two examples, this plan works equally well whether the differences are all negative or are alternatively positive and negative, or vice versa. To put it another way, in all cases:

Results of normal ordinary subtraction are negative.

Results of impossible subtraction are negative.

When there are but a few orders of differences, the work can often be performed with advantage in one column.

Practical Interpolation

Example: find a $4\frac{1}{8}\%$ basis for $3\frac{1}{2}$ s, 6 years to run.

4.10%	968,371.18
4.15%	965,787.92
4.20%	963,212.61
4.25%	960,645.21
	2,583.26
	2,575.31
	2,567.40
	7.95
	7.91
$\frac{1}{2}$ of 1st difference.....	1,291.63
$\frac{1}{2}$ of 2nd difference.....	.99
	<hr/>
Total correction to be subtracted from item at top of column	1,292.62
	<hr/>
	967,078.56

While the process of interpolation as explained is perfectly sound and can, in theory, be carried to indefinite lengths, nevertheless its practical usefulness is decidedly limited, and as a rule it is not worth while—even if attendant conditions do not make it impossible—to attempt to interpolate unless the interval in the original material is small. For instance, it is utterly impossible to obtain the present worth of an annuity @ $5\frac{1}{2}\%$ for 30 periods from the tables contained in the *Accountancy of Investment*.

* * * * *

The following difference factors have been computed and proven with the greatest of care and are believed to be free from errors of any kind. The fourth and fifth columns are, of course, carried to many more decimal places than will ordinarily be required. This was done for the benefit of those who may wish to compute factors for further orders of differences. In the first table for 100ths the fifth column is the only one containing rounded figures, the first four columns being perfect.

Each of these columns of factors is a series, and factors for any desired interval not given herewith may be interpolated, should that method be preferred to direct calculation.

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TABLE I
(Hundredths)

1st	2nd	3rd	4th	5th
.01	.004,95	.003,283,5	.002,454,416,25	.001,958,624
.02	.009,8	.006,468	.004,818,66	.003,835,653
.03	.014,55	.009,554,5	.007,094,216,25	.005,632,808
.04	.019,2	.012,544	.009,282,56	.007,351,788
.05	.023,75	.015,437,5	.011,385,156,25	.008,994,273
.06	.028,2	.018,236	.013,403,46	.010,561,926
.07	.032,55	.020,940,5	.015,338,916,25	.012,056,388
.08	.036,8	.023,552,	.017,192,96	.013,479,281
.09	.040,95	.026,071,5	.018,967,016,25	.014,832,207
.10	.045	.028,5	.020,662,5	.016,116,750
.11	.048,95	.030,838,5	.022,280,816,25	.017,334,475
.12	.052,8	.033,088	.023,823,36	.018,486,927
.13	.056,55	.035,249,5	.025,291,516,25	.019,575,634
.14	.060,2	.037,324	.026,686,66	.020,602,102
.15	.063,75	.039,312,5	.028,010,156,25	.021,567,820
.16	.067,2	.041,216	.029,263,36	.022,474,260
.17	.070,55	.043,035,5	.030,447,616,25	.023,322,874
.18	.073,8	.044,772	.031,564,26	.024,115,095
.19	.076,95	.046,426,5	.032,614,616,25	.024,852,338
.20	.08	.048	.033,6	.025,536,000
.21	.082,95	.049,493,5	.034,521,716,25	.026,167,461
.22	.085,8	.050,908	.035,381,06	.026,748,081
.23	.088,55	.052,244,5	.036,179,316,25	.027,279,204
.24	.091,2	.053,504	.036,917,76	.027,762,156
.25	.093,75	.054,687,5	.037,597,656,25	.028,198,242
.26	.096,2	.055,796,	.038,220,26	.028,588,754
.27	.098,55	.056,830,5	.038,786,816,25	.028,934,965
.28	.100,8	.057,792,	.039,298,56	.029,238,129
.29	.102,95	.058,681,5	.039,756,716,25	.029,499,483
.30	.105	.059,5	.040,162,5	.029,720,250
.31	.106,95	.060,248,5	.040,517,116,25	.029,901,632
.32	.108,8	.060,928	.040,821,76	.030,044,815
.33	.110,55	.061,539,5	.041,077,616,25	.030,150,970
.34	.112,2	.062,084	.041,285,86	.030,221,250
.35	.113,75	.062,562,5	.041,447,656,25	.030,256,789
.36	.115,2	.062,976	.041,564,16	.030,258,708
.37	.116,55	.063,325,5	.041,636,516,25	.030,228,111
.38	.117,8	.063,612	.041,665,86	.030,166,083
.39	.118,95	.063,836,5	.041,653,316,25	.030,073,694
.40	.12	.064	.041,6	.029,952,000
.41	.120,95	.064,103,5	.041,507,016,25	.029,802,038
.42	.121,8	.064,148	.041,375,46	.029,624,829
.43	.122,55	.064,134,5	.041,206,416,25	.029,421,381
.44	.123,2	.064,064	.041,000,96	.029,192,684

Practical Interpolation

TABLE I—continued
(Hundredths)

1st	2nd	3rd	4th	5th
.45	.123,75	.063,937,5	.040,760,156,25	.028,939,711
.46	.124,2	.063,756	.040,485,06	.028,663,422
.47	.124,55	.063,520,5	.040,176,716,25	.028,364,762
.48	.124,8	.063,232	.039,836,16	.028,044,657
.49	.124,95	.062,891,5	.039,464,416,25	.027,704,020
.50	.125	.062,5	.039,062,5	.027,343,750
.51	.124,95	.062,058,5	.038,631,416,25	.026,964,729
.52	.124,8	.061,568	.038,172,16	.026,567,823
.53	.124,55	.061,029,5	.037,685,716,25	.026,153,887
.54	.124,2	.060,444	.037,173,06	.025,723,758
.55	.123,75	.059,812,5	.036,635,156,25	.025,278,258
.56	.123,2	.059,136,	.036,072,96	.024,818,196
.57	.122,55	.058,415,5	.035,487,416,25	.024,344,368
.58	.121,8	.057,652	.034,879,46	.023,857,551
.59	.120,95	.056,846,5	.034,250,016,25	.023,358,511
.60	.12	.056	.033,6	.022,848,000
.61	.118,95	.055,113,5	.032,930,316,25	.022,326,754
.62	.117,8	.054,188	.032,241,86	.021,795,497
.63	.116,55	.053,224,5	.031,535,516,25	.021,254,938
.64	.115,2	.052,224	.030,812,16	.020,705,772
.65	.113,75	.051,187,5	.030,072,656,25	.020,148,680
.66	.112,2	.050,116	.029,317,86	.019,584,330
.67	.110,55	.049,010,5	.028,548,616,25	.019,013,378
.68	.108,8	.047,872	.027,765,76	.018,436,465
.69	.106,95	.046,701,5	.026,970,116,25	.017,854,217
.70	.105	.045,5	.026,162,5	.017,267,250
.71	.102,95	.044,268,5	.025,343,716,25	.016,676,165
.72	.100,8	.043,008	.024,514,56	.016,081,551
.73	.098,55	.041,719,5	.023,675,816,25	.015,483,984
.74	.096,2	.040,404	.022,828,26	.014,884,026
.75	.093,75	.039,062,5	.021,972,656,25	.014,282,227
.76	.091,2	.037,696	.021,109,76	.013,679,124
.77	.088,55	.036,305,5	.020,240,316,25	.013,075,244
.78	.085,8	.034,892	.019,365,06	.012,471,099
.79	.082,95	.033,456,5	.018,484,716,25	.011,867,188
.80	.08	.032	.017,6	.011,264,000
.81	.076,95	.030,523,5	.016,711,616,25	.010,662,011
.82	.073,8	.029,028	.015,820,26	.010,061,685
.83	.070,55	.027,514,5	.014,926,616,25	.009,463,475
.84	.067,2	.025,984	.014,031,36	.008,867,820
.85	.063,75	.024,437,5	.013,135,156,25	.008,275,148
.86	.060,2	.022,876	.012,238,66	.007,685,878
.87	.056,55	.021,300,5	.011,342,516,25	.007,100,415
.88	.058,8	.019,712	.010,447,36	.006,519,153

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TABLE I—continued
(Hundredths)

1st	2nd	3rd	4th	5th
.89	.048,95	.018,111,5	.009,553,816,25	.005,942,474
.90	.045	.016,5	.008,662,5	.005,370,750
.91	.040,95	.014,878,5	.007,774,016,25	.004,804,342
.92	.036,8	.013,248	.006,888,96	.004,243,599
.93	.032,55	.011,609,5	.006,007,916,25	.003,688,861
.94	.028,2	.009,964	.005,131,46	.003,140,454
.95	.023,75	.008,312,5	.004,260,156,25	.002,598,695
.96	.019,2	.006,656	.003,394,56	.002,063,892
.97	.014,55	.004,995,5	.002,535,216,25	.001,536,341
.98	.009,8	.003,332	.001,682,66	.001,016,327
.99	.004,95	.001,666,5	.000,837,416,25	.000,504,125

TABLE II
(Twelfths)

1st	2nd	3rd	4th	5th
.083,333,...	.038,194,...	.024,402,006	.017,793,130,	.013,938
.166,666,...	.069,444,...	.042,438,272	.030,060,442	.023,046
.25	.093,75	.054,687,5	.037,597,656	.028,198
.333,333,...	.111,111,...	.061,728,395	.041,152,263	.030,178
.416,666,...	.121,527,...	.064,139,660	.041,423,531	.029,687
.5	.125	.062,5	.039,062,5	.027,344
.583,333,...	.121,527,...	.057,388,117	.034,671,988	.023,693
.666,666,...	.111,111,...	.049,382,716	.028,806,584	.019,204
.75	.093,75	.039,062,5	.021,972,656	.014,282
.833,333,...	.069,444,...	.027,006,173	.014,628,344	.009,265
.916,666,...	.038,194,...	.013,792,438	.007,183,562	.004,430

TABLE III
(Sixteenths)

1st	2nd	3rd	4th	5th
.062,5	.029,296,875	.018,920,878	.013,895,035	.010,942
.125	.054,687,5	.034,179,687,5	.024,566,650	.019,039
.187,5	.076,171,875	.046,020,508	.032,358,170	.024,673
.25	.093,75	.054,687,5	.037,597,656	.028,198
.312,5	.107,421,875	.060,424,805	.040,597,916	.029,941
.375	.117,187,5	.063,476,562,5	.041,656,494	.030,201
.437,5	.123,046,875	.064,086,914	.041,055,679	.029,252
.5	.125	.062,5	.039,062,500	.027,344
.562,5	.123,046,875	.058,959,961	.035,928,726	.024,701
.625	.117,187,5	.053,710,937,5	.031,890,869	.021,526
.687,5	.107,421,875	.046,997,070	.027,170,181	.018,000
.75	.093,75	.039,062,5	.021,972,656	.014,282
.812,5	.076,171,875	.030,151,367	.016,489,029	.010,512
.875	.054,687,5	.020,507,812,5	.010,894,775	.006,809
.937,5	.029,296,875	.010,375,977	.005,350,113	.003,277

The Journal of Accountancy

Published monthly for the American Institute of Accountants by
THE RONALD PRESS COMPANY, 20 Vesey Street, New York, N. Y.
Thomas Conynghton, President; Philip J. Warner, Secretary;
Hugh R. Conynghton, Treasurer.

A. P. RICHARDSON,

Editor

EDITORIAL

Safeguarding Investment

The newspapers of December 26th contained an announcement from Washington to the effect that the capital issues committee would suspend operations December 31, 1918. It is understood that the committee is not to be dissolved, but is to become inactive.

Charles S. Hamlin, chairman of the committee, made the following statement:

In view of the rapid changes that have taken place since the signing of the armistice, the capital issues committee has voted to suspend its activities on December 31.

The committee will not be dissolved, but will remain inactive, unless it is found that the sale of new securities competes unduly with government financing or for other reasons it may become desirable for the committee to resume its work pending its dissolution by the president or by operation of law.

Although the war emergency which gave rise to the creation of the committee has passed, it is nevertheless imperative that capital should be saved and not wasted, and the removal of the restraining influence exerted by the committee during its existence should not be construed as approval of the financing of unnecessary public projects or private enterprises of doubtful merit. On the contrary, the financial needs of the government and the large capital requirements of the railroads and for the readjustment of American industries to a peace basis compel strict economy in the use of new capital.

While legitimate business may safely be left to work out its own problems, the capital issues committee feels that it would be unfaithful to its responsibilities if it failed to warn the public respecting the enormous losses sustained by the nation through the sale of worthless and fraudulent securities. In the opinion of the committee, the sale of such securities should be restrained in times of peace as well as in war, and it is strongly urged that congress establish adequate machinery to put a stop to this traffic.

The extent of the menace, due to the issue of such securities, to the holders of government bonds is revealed by the fact that schools are being established in some parts of the country to drill salesmen in the art of persuading investors to subscribe for unmeritorious or worthless securities. This can only be prevented by legislation vesting in some duly constituted public agency full power to restrain the offering of fraudulent or worthless securities.

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The capital issues committee warns the public and earnestly directs the attention of congress to the problem. It is the intention of the committee to make a supplementary report to congress recommending a law to prevent these existing abuses and such impositions upon the investing public.

The committee will maintain its offices in Washington until further notice.

The secretary of the treasury also has issued a statement relative to the suspension of activities by the capital issues committee which is of much importance. The text of the statement follows:

The decision of the capital issues committee to suspend its activities on December 31, should not be interpreted by the business public as a warrant for any expenditure of capital for needless or unwise purposes, whether public or private in their nature. Should it become apparent that voluntary restraints are not being exercised so as to prevent the misuse of capital, I shall request the committee to resume its control.

My chief misgiving in accepting the action of the committee arises out of the need the committee has frequently expressed, and the importance of which has become increasingly obvious, of protecting the public investor against the flood of worthless or doubtful securities which threaten the market when the restrictions are removed; and present conditions emphasize the importance of obtaining emergency legislation as speedily as possible, so as to be able to cope effectively with this evil. The government not only should protect itself as to future bond issues, but as well owes a duty to the millions of Liberty bond buyers, to restrain reckless fraudulent promoters, particularly at this time.

I intend to ask congress immediately for legislation that will check the traffic in worthless securities, while imposing no undue restrictions upon the financing of legitimate business, and shall urge that it be made effective before the close of the present session. Meantime, it may become necessary, before such legislation is passed, to reassemble the committee for the purpose of resuming its functions.

Side by side with the foregoing statement in one of the New York papers appeared an offering of \$10,598,000 St. Louis-San Francisco prior lien mortgage 6% gold bonds. The bonds are offered by two well-known New York houses.

In the advertisement appears a letter of the president of the company which sets forth the nature of collateral of the bonds, purpose of the flotation, earnings for 1917 and 1916 and other information. Then follows the statement that the issuance of the bonds has been approved by the United States Railroad Administration, and in small type at the bottom of the advertisement appears the following:

The above statements are not guaranteed, but are based upon information and advice which we believe to be accurate and reliable, and upon which we have acted in purchasing these securities.

The advertisement is a fair sample of the better class of security advertising and there is no reason to doubt the truth of the representations which it contains.

Editorial

Other advertisements are beginning to appear which contain such statements as "From a letter of the general manager we quote as follows," and "The legal features of the issue have been approved by Messrs. (giving name of a legal firm or firms)."

We believe that there is a vital relationship between the public interests, the announced desuetude of the capital issues committee and the offering of securities.

The United States has become for the first time in its career a creditor nation. The country expects to enter upon an era of wonderful prosperity. It is certain that there will be efforts to sell all manner of stocks and bonds, some of which could not by the utmost stretch of imagination be termed securities, and the public, always gullible, will almost certainly buy the things which are offered if the promise of return be made sufficiently attractive.

It has been stated in congress that one or more bills will shortly be introduced providing for "blue sky" legislation somewhat in the manner of the blue sky laws existing in some of our states.

The statements of Mr. Glass and Mr. Hamlin and the promise of introducing "blue sky" bills indicate that the official mind is awake to the danger of indiscriminate flotation of securities or insecurities. But even in the days when wild cats were not unknown in Wall Street there was always a minority of opinion opposed to indiscriminate flotation of stock and bond issues.

The public of those days was very much like the public of the days that are to come, and when money is abundant there will surely be capital available to any one who can present a plausible promise of high return on capital invested.

It seems to an accountant an extraordinary thing that the one most effective and obvious preventive of the sale of worthless stocks and bonds has escaped official notice.

We believe that the reputable stock exchanges of the country will do their utmost to discourage investment in shady undertakings, but it must be remembered that there are security marts which are not likely to question over-searchingly the intrinsic value of securities offered by their members; and there is a great body of small investors who are not able to differentiate between truth and fiction and good and bad when it comes to financial affairs.

Here lies the opportunity for the accounting profession to justify its own opinion of its value.

If congress and the various government departments concerned were to insist that no security should be offered to the public unsupported by the testimony of an impartial and qualified investigator the possibility of successful flotation of invalid or doubtful stock and bond issues would be reduced to a minimum.

For example, if advertisements contained statements of the financial condition of the companies made and signed by reputable accountants the public could feel a fair degree of confidence that things were as they were represented to be.

Even the most conscientious company officer is likely to overestimate the intrinsic worth of the company with which he is connected.

My dog is ever better than thy dog and sometimes my opinion is based more upon intimacy and preference than upon true knowledge of canine merits.

It is altogether unwise to rely solely upon opinions expressed by companies issuing securities, and we believe that company officers of the right kind would vastly prefer that the statements of condition should be prepared and presented by impartial investigators than by persons on the payroll of the companies concerned.

Yet it is a remarkable fact that an offering of securities supported by an accountant's statement is a rare exception.

The accounting profession should stand as the intermediary between the investor and the investment. The accountant should be the fiduciary of public trust with an obligation to speak the truth and nothing but the truth.

The capital issues committee during its active supervision of new issues has been a protection against fraudulent or worthless security offerings. During the war there has been small temptation and little opportunity to issue securities other than those of the government. The tremendous volume of investments in the Liberty loans has absorbed practically all the available investment capital, but there will be only one or two more colossal issues of government securities and the amount of capital available for investment will begin to accumulate rapidly.

We do not believe that the capital issues committee would be the best means of preventing deception of the investing public, but it seems quite clear to us that there should be some govern-

Editorial

mental requirement relative to the investigation of the financial condition of companies seeking to sell securities. The English companies' act is far and away superior to any federal or state legislation in this country governing the issuance of securities, and with that act as a model it should not be difficult for congress to prepare a measure for the safeguarding of the people's capital.

We commend to our legislators the consideration of the utilization of the public accounting profession for that purpose in which its activities may be most fitly and valuably employed.

Income Tax Department

EDITED BY JOHN B. NIVEN, C.P.A.

The most hopeful forecast that has been received regarding the passage of the revenue bill is that it may be reported by the conferees and passed by both houses ready for the signature of the president by February 1, 1919.

Supreme court decisions have been quoted in which the right of congress to impose a tax measured by the income of the previous year is affirmed, thus setting at rest the doubts that have been circulated as to the constitutionality of an income tax law retroactive in its effect and even if enacted in a year subsequent to that to which it relates.

The only new ruling available, bearing on income taxes, is T. D. 2773. It relates to the 1909 corporation excise tax law, but is of interest because of its distinction, as made by the court, between maintenance and depreciation. Maintenance, "the upkeep or preserving of the condition of the property includes the cost of ordinary repairs necessary and proper from time to time for that purpose." But "depreciation is not to be confused with ordinary repairs," and is "intended to cover the estimated lessening in value of the original property, if any, due to wear and tear, decay or gradual decline from natural causes, inadequacy, obsolescence, etc., which at some time in the future will require the abandonment or replacement of the property in spite of ordinary current repairs." Hence repairs were deductible as an "expense," and depreciation also, because specifically mentioned in the act.

The 1917 act contains substantially the same wording in dealing with the same subject, which is further explained in article 159 of regulations 33. Depreciation is there described as the loss "from wear and tear due to the use to which the property is put and which loss has not been made good through expenditures for renewals, replacements and repairs deducted under the heading of expense for maintenance and operation."

TREASURY RULING

(T. D. 2773, November 8, 1918.)

Special excise tax on corporations—Decision of court.

A steamship company is entitled to deduct from gross income in annual tax returns required by section 38 of the act of August 5, 1909 (36 Stat., 112), amounts paid out for ordinary and necessary repairs in the maintenance and operation of its business and property and in addition a reasonable allowance for depreciation of property, if any.

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DIVISION
OF THE NORTHERN DISTRICT OF CALIFORNIA, SECOND DIVISION. No. 15782.

The San Francisco & Portland Steamship Co., plaintiff, v. John J. Scott, collector of internal revenue, etc., and August F. Muentner, defendants.

Income Tax Department

[Memorandum by BEAN, district judge (sitting by special assignment).]

This action is to recover certain amounts paid by the plaintiff under protest as excise taxes levied under the act of congress of August 5, 1909, section 38 (36 Stat. L., 112) for the years 1910 and 1912.

In its returns plaintiff included in its deductions for ordinary and necessary expenses paid out for the maintenance and operation of its business and property, for the year 1910, \$17,088.77 and for the year 1912 \$25,371.40, being amounts expended in each of such years for making "ordinary and necessary" repairs to the deck department, engine department, and commissary department of its steamers, and also \$59,642.11 for 1910 and \$79,350.96 for 1912 for depreciation of such steamers, being 5 per cent. of the book value thereof.

It is admitted that the deductions for depreciation are reasonable and should be allowed, but the commissioner ruled that the cost of making *ordinary and necessary* repairs was not a proper item to be included in the operation and maintenance expenses but was covered by the deductions for depreciation and required plaintiff to pay taxes thereon, which it did under protest and hence this suit.

The question thus raised does not seem to have been directly decided in any reported case to which my attention has been called or which I have been able to find, although the cost of repairs and upkeep was assumed in *Grand Rapids & Indiana Railway v. Doyle* (245 Fed., 792) to be an item properly included in operating and maintenance expense.

Under the law the tax is to be laid on net income and such net income is to be ascertained by deducting from the gross income (1) all the ordinary and necessary expenses actually paid within the year out of income in the "maintenance and operation" of the business and property; (2) losses actually suffered not covered by insurance, including a reasonable allowance for depreciation, if any. * * *

It will thus be seen that the deductions allowed are to include not only ordinary and necessary amounts actually paid out in the operations of the property but also the amounts paid out in the maintenance thereof, and in addition a reasonable sum for depreciation, if any. Now, the operation of a business or property includes payment for labor and materials which go into the actual operation thereof, while maintenance means the upkeep or preserving the condition of the property to be operated and therefore, in my judgment, includes the cost of ordinary repairs necessary and proper from time to time for that purpose. Depreciation as used in the statute is not to be confused with ordinary repairs. It is intended to cover the estimated lessening in value of the original property, if any, due to wear and tear, decay, or gradual decline from natural causes, inadequacy, obsolescence, etc., which at some time in the future will require the abandonment or replacement of the property in spite of ordinary current repairs. It follows that the tax complained of was illegally exacted and the plaintiff is entitled to judgment for its recovery. Findings may be prepared accordingly.

Students' Department

EDITED BY SEYMOUR WALTON, C.P.A.
(ASSISTED BY H. A. FINNEY, C.P.A.)

INSTITUTE EXAMINATION, NOVEMBER, 1918

In regard to the following attempt to present the correct solutions to the questions asked in the examination held by the American Institute of Accountants in November, 1918, the reader is cautioned against accepting the solutions as official. They have not been seen by the examiners—still less endorsed by them.

AUDITING

Question 1:

How would you proceed to audit the books and accounts of the treasurer of a local Red Cross chapter? What evidence would you require as to the propriety of disbursements, and how would you ascertain that all receipts were duly recorded?

Answer:

In the only local chapter with which I am at all acquainted there is no auditor or comptroller. There is a director or supervisor for each bureau or section of the work, a business manager and a chairman of the finance committee. In auditing the disbursements I should require the production of requisitions by the directors or supervisors of the various sections, approved by the business manager or his assistant. Proof of the receipt of goods purchased should be furnished by the records of the various receiving departments.

The proof that all receipts had been duly recorded would depend largely upon what kind of internal check was employed. If money for subscriptions, memberships, etc., was received by one person and the receipt given by another, it would be necessary only to test enough of the work to satisfy oneself that everything was regular. If the same person both took in the money and issued the receipt there would be no way to vouch for the accuracy of the records. Stubs of receipt books or carbon copies of receipts are no proof at all. It is manifest that a stub need not correspond with a receipt that is given up and is not available for comparison. A carbon may not be a true copy of the original. It is easy to insert above the carbon a sheet of paper thick enough to prevent any record by the carbon when the receipt is written for one amount, and then to write on ordinary paper a receipt for a smaller sum which will be copied by the carbon. In an office this would be hazardous as there is great danger of its being observed by others of the office force, but it could be done by outside solicitors.

In a very small chapter one person is likely to be in charge of every department. No actual audit is possible in such a case, and reliance must be placed on the character of the person in charge, who is always a lady

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of standing in the community. The citizens of a small city usually know fairly well what a person in a prominent position is doing, and virtually constitute an auditing committee in themselves.

The question does not ask for proofs of payments.

Question 2:

Draw up an outline of a report on your audit of the accounts of a corporation that has recently erected a large apartment house. Assume your instructions covered the period of erection and at least one year of operation.

Answer:

The question does not imply that the corporation was organized to build and operate one building alone. Therefore no report is made as to the organization of the corporation.

I should report that I had examined the contracts and vouchers for the erection of the building and had found that they furnished satisfactory proof that the labor and material cost amounted to so many dollars, detailed in annexed exhibit as the cost of excavating, foundations, brick, stone, etc., etc., subdivided to a greater or less degree, as desired. The plants for heating and for hot water and the distribution systems for these and for cold water should be scheduled separately, as should also be an electric system, if the building furnished its own electric light. The cost would also include the architect's fee, city permits, fire insurance during construction, employers' liability insurance and every other expense necessitated by the work of construction.

Finally there would come the cost of financing. If bonds had been sold to cover part of the cost, I would report that I had verified the price at which they had been sold by evidence furnished by the brokers. If sold at a discount, I would state the effective rate of interest for future guidance in writing off the discount.

In deference to the general opinion, I would add to this cost of the building any interest paid to contractors or paid on notes payable to raise money temporarily, and also the interest on the bonds at the effective rate until the building was ready to receive tenants.

Covering the year of operation, I would report that I had examined the leases on file and had compared their terms with the rent register, and that I had thus been able to verify the rent which ought to have been received, balancing this against the rents which the cashbook showed had been paid and the unpaid rents due by delinquent tenants, detailed by names and amounts.

I would report that I had found proper vouchers for all disbursements and had satisfied myself that all accounts payable were on the books. The procedure would not differ from that of any other audit.

I would prepare and submit a profit and loss statement, exhibiting the total rents earned, less a reserve against bad debts, then a detailed list of expenses, such as salary of superintendent, janitors' salaries, janitors' supplies, fuel, salaries of engineers and firemen, insurance, repairs, depreciation of the building and of the heating and other equipment, and any

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other expenses large enough to classify except as "miscellaneous." Deducting the total of these expenses from the rents, I would show the difference as "operating profit." I would then list the financial expenses of interest on notes payable, if any, of interest on bonds and of pro-rated discount on bonds. Deducting these from the operating profit, I would show the "net profit (or loss)" for the year. A proper balance-sheet would complete the report.

If any rents were paid in advance at the end of the year, I would, of course, treat them as deferred credits, and not as earnings.

Question 3:

A corporation has issued \$1,000,000 of 6 per cent 20 year bonds at 90 and for 8 years has written off 5 per cent of the discount each year. Last year an opportunity occurred to buy in \$200,000 at 85, which was done and the bonds were canceled. The directors propose to take up into their year's revenue \$30,000, the discount saved upon extinction of this liability. Do you approve? If not, what course would you advise, or, if they insist how would you act?

Answer:

Since, in an examination I do not have access to a bond value table, and have not time to calculate the effective rate of interest myself, I am forced to use the crude method, already adopted, of writing off 5 per cent of the discount annually.

Of the original discount of \$100,000 there has already been written off 5 per cent or \$5,000 annually for 8 years, or \$40,000. This leaves the carrying value of the bond liability \$940,000—\$1,000,000 less balance of discount \$60,000. The bonds are being carried at 94.

Therefore the \$200,000 of bonds bought stood on the books as a net liability at 94, or \$188,000. When 85 or \$170,000 was paid for them there was a saving in discount of \$18,000—not of \$30,000.

The debit to bonds \$200,000 would be represented by

Cash	\$170,000	
Remaining discount 6% of 200,000	12,000	
Discount charged off 4% of 200,000	8,000	
Saving or profit	10,000	\$200,000

Besides the credit to cash, there should be a credit to discount on bonds of \$12,000. The \$8,000 represents discount already charged off and now recovered and is therefore a legitimate credit to surplus. As the \$10,000 is also a saving of discount, it might be called an extraneous profit to be credited to surplus, but a more conservative procedure would be to credit it to discount on bonds, reducing the balance of that account to \$38,000, and consequently reducing the annual write-off of bond discount from \$4,000 to \$3,166.67. This will realize the profit of \$10,000 in 12 annual instalments of \$833.33 each, instead of in one lump sum now.

If the directors, after having the matter explained to them, insisted on crediting surplus with \$18,000, I should yield to their wishes. If they insisted on the credit of \$30,000 I should protest and refuse to sign an audit certificate.

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Question 4:

"Inventory of merchandise should be carried at cost or market, whichever is lower." Do you assent to this proposition? Can you suggest circumstances in which you would approve a departure therefrom? Would you be influenced by events or conditions subsequent to the date of closing the accounts? Give reasons.

Answer.

As a general rule the proposition is sound. The object of a balance-sheet is the exhibition of the true condition of a business. An inventory appearing in it is supposed to represent actual value at a given date. If cost is used when that is higher than the current market value a wrong impression is given of the stock-in-trade. This may be used as an argument for valuing at market when that is higher than cost, but this argument is met by the stronger argument that a profit must not be anticipated. The same object can be attained as far as financial standing is concerned by using the cost valuation and showing the market value as a note.

It is contended by some that if a profit is not made until the goods are sold, and therefore that no profit is realized in the increase in market value, it will equally follow that no loss can be incurred except through a sale. The only answer to this is that it is more conservative and is also wiser to anticipate a loss than a profit.

One condition that would require the use of the market value for materials on hand, whether that value were lower or higher than cost, would be the preparation of a balance-sheet to be used as the basis of the sale of the business. The purchaser should pay whatever the goods would cost him in the open market.

If a fall in the price of raw materials does not carry with it a corresponding drop in the selling price of the product, there does not seem to be any imperative necessity for using the market price. The rate of profit is apt to be more steady if cost is used.

If the statement was being made some time after its date and in the meantime the market, which had been lower than cost at that date, had risen to or above cost, I should feel justified in using cost price, on the ground that the drop had been merely a temporary fluctuation.

Question 5:

Assume you are to audit periodically the accounts of the trustees of a decedent's estate, holding a large number of investments and frequently adding thereto. Outline a plan for your own guidance to detect the failure to collect or record the income from such investments. What would be your attitude regarding accrued interest or dividends in closing the accounts periodically?

Answer:

If my audit begins with the appointment of the trustees, my first duty would be to ascertain what securities had been turned over to them by the executors. Then I would verify all the subsequent purchases as to price and time of purchase. This would enable me to make a schedule of all securities held.

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This schedule should show the rate of interest and date of its payment on all bonds and mortgages and other notes and of dividends on preferred stocks. If the cashbook did not show receipts corresponding to these records, it would be my duty to ascertain the reason.

If any of the investments consisted of common stock, the dividends that had been paid could be ascertained by consulting financial journals with respect to many stocks whether listed or not. Correspondence with officers of companies whose dividends were not so recorded would establish the rate and date of any dividends they may have paid. Absence of a record of the receipt of these dividends on the cashbook would require explanation that it might be difficult to make.

As the trustees of an estate are not conducting a business for profit, I should pay no attention to accrued interest in closing the books. The only duty of the trustees in regard to the income is to collect it all and to account for what they collect. The only time accrued interest would affect their accounts would be when they bought interest bearing securities on which interest had accrued or if any securities were sold or were given to any heirs in place of a cash distribution. In this country dividends, even if preferred, are generally considered as not accruing from day to day, but as belonging to the period in which they are declared; therefore no accrued dividends would be noticed, unless already declared.

Question 6:

Give some general principles which will guide you in determining whether too much or too little provision has been made for depreciation of buildings, machinery, tools, goodwill, patents, franchises. Would a flat rate cover all these assets satisfactorily?

Answer:

Montgomery says that depreciation is a local issue, by which he means that the rate is governed by local conditions. The auditor should study these conditions, seeking the advice of those who are thoroughly acquainted with the situation. For instance, the character of the water used may affect the life of a boiler. The fixing of the rate then becomes a matter of judgment, based on the greater or less experience of the auditor, as to the probable life of the asset.

In the case of buildings or machinery the amount of repairs would affect the rate, since an asset that is kept in first-class order will not depreciate as fast as one that is allowed to run down. Actual replacement of parts should be charged to depreciation reserve. If charged to repairs, the rate of depreciation should be smaller. If machinery is fitted only to produce a certain output which is not likely to be required after a comparatively short period or if it is liable to be superseded by improved machines, the rate of depreciation should be largely increased. This applies also to patents.

If by tools is meant only those that are perishable, no rate of depreciation can be applied to them, because the variation in them is too great. They should be treated in either of two ways: (1) an inventory should be taken at the end of a fiscal period and the difference between it and the

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tools account should be charged to tool expense; or (2) the normal quantity of tools required should be determined and the supply always kept up to that standard, all purchases of tools being charged to tool expense.

Goodwill, since it represents earning power in excess of the normal, does not depreciate in a prosperous concern, and therefore does not have to be written off. On the other hand, if the concern is not prosperous, there will be nothing against which to write it off, unless the capital is reduced.

Patents do not depreciate—they waste by lapse of time. As their life is known, the annual rate of reduction in value is also known. This is modified, as already stated, by the danger of supersession, which in a sense is depreciation.

Franchises, when limited in time, are much like patents. When unlimited there is no occasion for writing them off, unless there is some reason peculiar to the case why they are liable to lose their value.

Applying to assets of such varying natures a flat rate of depreciation covering all alike would be impossible. Each class must be treated separately on its own merits.

Question 7:

On pointing out the insufficiency of the provision for depreciation on machinery, which the directors admit, you are met with the argument, supported by evidence, that the real estate values have appreciated to an even greater extent than the entire depreciation of other assets. As this latter is not taken up on the books you are asked to allow the one to offset the other. Give reasons for your agreement or disagreement.

Answer:

The answer must be one that would convince the directors, who are not accountants.

First, I would object to keeping accounts by unexpressed offsets, especially when the items are dissimilar. Depreciation of machinery is a manufacturing expense; increase in value of real estate, if allowed, is an extraneous or accidental profit. Therefore, if the contention of the directors is to prevail, an entry must be made charging real estate and crediting reserve for depreciation.

Next, I would call attention to the fact that the writing up of the real estate would put on the books a profit that had not been and might never be realized, since real estate has an unfortunate uncertainty as to value, which might cause a drop even greater than the recent rise. I would try to show them that a profit could arise only from a sale, and that the opinion of a real estate broker, even backed by an offer to buy, was not a sound basis for a profit, unless his offer was accepted and the profit was actually realized in money.

Finally, I would state that it made no difference which manufacturing expense was offset against the rise in value of the real estate—therefore that it would serve their purpose fully as well to allow the depreciation to be charged as it should be, and then to charge the indirect labor of one

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of the departments to real estate, because it happened to be the right amount. The "reductio ad absurdum" is often a potent argument to those who do not understand accounting principles.

Question 8:

A financial institution has a large amount of capital invested in mortgages which are constantly changing. Suggest a plan for confirming by averages, and without a complete detailed examination of every account, the amount of income on this investment taken into profit and loss account for a year under examination.

Answer:

Each day of the year one day's interest accrues on the mortgages on hand, therefore the total interest earned in the year will be one day's interest on the sum of the daily balances of the mortgages account for the year, or one year's interest on the average of the daily balances, found by dividing the sum of the daily balances by 365.

If the institution is a bank, it should have a daily trial balance from which the daily balances of mortgages on hand may be obtained. If not, they must be built up from the ledger account and checked with the trial balance from time to time. For a Sunday or a legal holiday the balance of the preceding day must be repeated, since interest accrues every day, whether a dies non or not.

In listing and adding the balances sufficient accuracy will be attained for auditing purposes by taking the nearest hundred dollars of each balance. That is, \$263,428.19 would be called \$263.4, while \$263,469.38 would be \$263.5.

This is all based on the assumption that all the mortgages bear the same rate of interest. If the interest varies, no average is possible unless the auditor classifies the paper by opening a memorandum ledger account on his own sheets with each class of mortgages.

Question 9:

State how you would satisfy yourself that all outstanding liabilities of a business are properly taken up in the balance-sheet. Point out what you would like to find by way of system that would simplify this task. How would you indicate on the balance-sheet as of December 31st:

- (a) Preferred dividend (cumulative) due the previous November 1, not declared;
- (b) Ordinary dividend for the year, declared the following January 22nd;
- (c) Ordinary dividend declared December 30th, payable February 1st?

Answer:

The verification of outstanding liabilities is one of the most difficult tasks of an auditor, because manipulation of the accounts would consist of the omission of entries crediting accounts payable for goods received whether the goods were included in the inventory or not.

If the omitted liability is one item of a number bought from the same concern during the month, the statement of that concern would disclose the omission. If only one bill had been bought from a concern during the last month, its suppression would not be thus discovered.

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Nearly every concern has some system of recording the receipt of goods. The auditor should check all important items for the last fortnight or so of the period to see that they have been entered in the purchase journal or voucher register. If there are any indications in the inventory as to when goods were bought, purchases of recent date should be traced, as they may have been put into the inventory and both receiving and financial records held up until after the close of the period.

If the audit is being made some time after December 31, the entries in the purchase journal or voucher register since that date should be examined to see whether or not they include items that should have appeared prior to the closing of the books. The auditor should remember that it is not admissible to omit liabilities because the goods are not included in the inventory. While profits are not affected, the financial standing is, because in this way quick liabilities are offset against slow inventory assets.

I should like to find a complete system by virtue of which no goods of any kind could be received without going through a receiving department where competent records were kept. The ability to check these records against an equally competent and independent stores record and these against the proper purchase and accounts payable entries would greatly simplify the task of the auditor.

Accrued liabilities for taxes, wages, etc., would be easily ascertainable from the records.

To detect notes payable outstanding and not recorded, the auditor should inquire closely into the source of any large receipts of cash as shown by unexplained items on the cashbook. The amounts may be credited to the personal accounts of some of the officers. If they were allowed to remain there intact, they would appear as liabilities, it is true, but not of the same character as notes payable in the hands of outsiders. If such notes were renewed, interest would have to be paid. Therefore the auditor should always verify payments of interest as being due on recorded notes. If there is no recorded note to which the interest is applicable, the auditor would be guilty of gross carelessness if he did not discover the existence of the unrecorded note.

However, there are circumstances in which an auditor is not to blame for not discovering an unrecorded note. If the money is borrowed from persons other than the usual sources of loans, is used directly in payment for goods without going through the cashbook and the goods can be received without being recorded in a receiving department, either through lack of system or in any other way, there would be no record which would give the auditor any clue. If the interest on a renewal is paid by the personal cheque of an officer whose account is covered by a credit for some special expense, such as travelling, the auditor could not possibly detect the existence of the note.

- (a) Cumulative preferred dividends are not a liability until they are formally declared; therefore they cannot be put on the books. In preparing a balance-sheet, however, a notation should be

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made after the title surplus, "subject to past due preferred dividend of \$....." This is done in order that all parties in interest may have due notice of the true condition of affairs.

- (b) No notice should be taken of a common dividend that is not declared until after the date of the balance-sheet.
- (c) Any dividend declared prior to the date of a balance-sheet, although not payable until after it, should be credited to dividends payable and charged to surplus, when declared. It would appear on the balance-sheet as an active liability, classed with ordinary accounts payable, but separately stated.

Question 10:

Your verification of the securities of a corporation has to be made at a date about two months subsequent to the date of the balance-sheet you are asked to certify. Can you suggest steps which will enable you to do this without risk of overlooking serious overstatement?

Answer:

The proper procedure would be to trace all transactions in securities for the two months since the date of the balance-sheet. Starting with a list of the securities purporting to be on hand at the balance-sheet date, any sales that have been made should be verified by brokers' statements, and purchases should be verified by similar statements for prices and by finding the securities on hand. In this way a complete schedule could be prepared of the securities that should be on hand at present. The securities actually on hand should be compared with the schedule. All securities should be examined at one time to prevent manipulation. Certificates out for transfer should be verified by correspondence.

Question 11:

In auditing the books of a club with a restaurant, bar and cigar stand you are not satisfied that supplies are properly accounted for, although an inventory is supposed to be taken every month. How would you get about verifying your suspicions regarding the more expensive commodities (wine, liquors and cigars)?

Answer:

I should adopt a plan which should be used by all clubs to detect such shortages. Either quantities or retail prices may be used, the latter being more convenient.

Using cigars as an example, the inventory at the beginning of the month is classified by retail prices and extended at those values. To this is added the retail price of all cigars purchased during the month. From this total is deducted the amount which the records show were sold during the month, which, of course, would be at retail prices. The remainder should be the value at retail of the cigars on hand at the end of the month, which should be compared with the inventory extended at retail prices.

This will be an approximate verification, owing to the varying prices at which many cigars are sold, as in the case of those that retail at 10

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cents each or 3 for 25 cents. An analysis of a few days' sales could be made to establish the average custom in that respect, which would make the approximation closer.

Of course, the use of retail prices would be confined to the verification of quantities sold. For financial statements the inventory should be at cost.

Wines and beer that are sold only by the bottle are very easily checked as to quantity, but liquors sold by the portion are less easy to check, because they are subject not only to a difference in price according to the number served at each order, but also to a difference in the size of the portions when each consumer pours out his own portion. The latter difficulty is obviated when each portion is served in a small bottle, so that the exact number of portions in the original container is known.

Question 12:

Indicate what would guide you in examining and criticizing accounts receivable carried on the branch office books of a business. What would you require before

- (a) accepting the debts as good, or
- (b) writing off those you were told were bad?

Answer:

The question does not state whether or not I am examining the books at the branch itself. If I were, or if the home office were in possession of carbon copies of all the branch accounts,

- (a) I would consider as good all accounts that were not past due or that were only slightly past due, if satisfactory reasons were given for the delay;
- (b) I would recommend writing off those that were long past due, the customs of the business in regard to length of credit being taken into consideration.

If I did not have access to the branch books or to authentic copies of them, I should be obliged to rely on a classified trial balance of the accounts receivable arranged in columns for those that are current, a short time past due and long past due, certified to by both the bookkeeper and the branch manager. If monthly trial balances had been sent in by the branch, the accounts long past due would probably be revealed by their balances not having changed for a number of successive months.

If any cause existed for believing that, by reason of insufficient control or internal check, the branch management had concealed peculations of collections from accounts receivable, I should require authorization of all non-cash credits to customers' accounts, and should then circularize all debtors.

INCREASE IN STUMPAGE VALUE

Editor, Students' Department:

SIR: It is generally conceded that fixed assets should be carried at the original cost value.

In the case of timber lands bought many years ago, this appears to have aroused a storm of contention when the government proceeded to

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fix prices in the various lumber industries. The prices naturally were to be fixed on the basis of present costs and the lumber men have contended that the present market value of the timber stumpage should be used.

A prominent man argued strongly before the federal trade commission recently on this matter and was opposed by one of their experts. The lumber man gave a number of different reasons for his stand, the most important ones being as follows:

The amount that should be charged into the manufacture of lumber, for timber as exhausted—in other words, the stumpage charge—should be the reasonable market or replacement value thereof at the time when said timber is manufactured into lumber because:

1st. The manufacturer is entitled to the reasonable market value in liquidating his investment, to the same extent that the timber owner is entitled to said reasonable market value in the sale thereof to a prospective manufacturer.

2nd. The manufacturer originally invested not only to earn a profit in manufacturing, but also to earn the increment in the property in which he invested. This was the chief reason for investing, along with the assuring of a stable timber supply.

3rd. The stumpage should be absorbed in the operation of the manufacturer who owned his stumpage, in the same manner as if he was conducting two distinct operations with two different sets of stockholders, and the reasonable market value of his stumpage should be included in his cost rather than his original purchase price, plus his carrying charges.

Will you please give me your opinion on this matter, as the industry with which I am associated is confronted with the same problem.

Yours very truly,

G. W. W.

Your first sentence speaks of fixed assets, but your problem does not deal with fixed assets.

The proper definition of a fixed asset is one that is a permanent investment, necessary to the business and not intended for sale. Stumpage will not come under this classification. It is in a class by itself, a floating asset, but not a quick asset. It is midway between a fixed and a quick asset, as the latter is usually understood. It therefore is not subject to the rules that govern strictly fixed assets.

The treatment of very slow floating assets has not been very much discussed in the text books. Besides stumpage there are others, such as hubs, felloes, etc., in a wagon factory, which are kept seven or eight years to season; whiskey in storage to be aged, etc. In these cases the asset grows more valuable intrinsically each year. This increase in value is not an unearned increment, because in each case it has cost the owner interest on the money invested, and in some cases storage and insurance. I cannot see that there is any difference in kind between this increase and the increase in value of a baby pig to a fat hog. If the farmer is entitled to raise the value of his hog, I think the lumberman should be allowed to increase the value of his stumpage.

Of course, this is only my personal opinion and must be taken as such. If the federal trade commission does not agree, its decision must govern.

BOOK ENTRIES AS AFFECTING CONTRACTS.

Editor, Students' Department:

SIR: I have recently run across a problem on which I would like a little information. I have three solutions, one each from the two parties

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most concerned and my own, and no two of them agree. The case is as follows:

A employs B for a period of ten years to build a plant, A to furnish all capital necessary, B to construct the plant and after construction operate it under the direction of A. B is to receive a stated monthly salary, payable in cash, plus a share equal to 5% of the net profits of the business from and after the commencement thereof, which share shall be credited to the account of B upon the books of the company, and shall remain in the business and be credited and accumulated during the remainder of the employment period until the share of accumulated profits shall amount to 1/20th of the then total valuation of the property, the plant and business, including working capital, and all subsequent additions thereto to the time of said computation, when the accumulation shall cease and B shall be entitled to and own free and clear an undivided 1/20th share or interest in the property, plant and business, including working capital, which share or interest shall be thereafter credited with its proportionate share of the earnings of the business as a fully paid interest therein. . . .

At the expiration of the employment period A or his legal representatives, "will purchase the share of B at its then book value for cash, said book value to be figured upon the original cost of said property, plant and business with all additions thereto, including undivided profits thereon without deduction for depreciation thereof."

It is over this last clause that the trouble has arisen. The plant has been operated for several years without allowing for any depreciation, but now in order to take advantage of that part of the income tax which permits depreciation to be deducted in arriving at net profit, A insists upon depreciation being figured. B contends that he will lose by this operation. It will, of course, have the effect of reducing his share of the profits, so that at the end of the employment period his account will be smaller by 1/20th of the amount of the reserve set up for depreciation. The question is, will he jeopardize his right under the contract to enforce a settlement on the basis of the contract by allowing depreciation to be taken into the accounts at this time?

Another question: we have been reserving from current profits and charging our monthly operations with a certain per cent of the payroll, the reserve to take care of claims of employees under the workmen's compensation law. Suppose, at the end of the employment period there is quite a snug balance to the credit of this account, would B be entitled to his 1/20th share of this account as an undivided profit?

Yours very truly,

Hillsboro, Illinois.

A. R. T.

The first question is too much like a legal question for a mere accountant to pass positive judgment upon it. However, I hazard the opinion that B will not jeopardize his interests by allowing the setting up of a reserve for depreciation. The contract virtually says that the book value is to be figured on the original cost without deduction for depreciation. If this means anything, it means that in estimating the book value of the business the reserve for depreciation shall be ignored. It must be added back to the surplus profits as if it had never been charged off against them. This does not have to be done on the books—it is merely part of the calculation of the price to be paid by A. It is plain that B gains an unfair advantage, but that is what the contract calls for and he is entitled to it. No routine entries on the books can be considered an alteration of the contract.

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A general reserve, such as a reserve for contingencies, or, as in this case, a reserve for workmen's compensation, is always considered a subdivision of the surplus. The surplus itself is a reserve for contingencies and any reserve that is intended to cover an event that is not certain to happen is a mere sub-class of the surplus. It differs radically from a reserve for depreciation, which is not part of the surplus, because it represents an expense which has already occurred or is absolutely certain to occur. B is therefore entitled to his share of the business without any deduction on account of the reserve in question, provided all claims against the reserve have been settled to date.

William P. Field & Co. announce the removal of their offices to rooms 315-316 Edificio Horter, Obispo 7, Habana, Cuba.

Haskins & Sells announce that Edmund C. Gause, manager of the Pittsburgh office of the firm, has been admitted to partnership as of December, 1918.

Robert M. Holtzman announces the removal of his office to 509-510 Lincoln building, Philadelphia.

McLaren, Goode & Co. announce the opening of a branch office at Deseret Bank building, Main Street, Salt Lake City, Utah.

Davis, Teeter & Niquette announce the opening of a branch office at 805-6 Ford building, Detroit, Michigan.

J. S. M. Goodloe announces the opening of an office at 141 Broadway, New York.

A. G. Lingley announces that he has severed his connection with Paterson, Teele & Dennis and is now auditor of the National City Bank of New York, 55 Wall Street, New York.

The Gross Accounting Company announces the removal of its office to 141 Broadway, New York.

Crockett, Couchman & Crawford announce the removal of their Kansas City offices to 609-610 Republic building, Tenth and Walnut streets.

The Journal of Accountancy

Official Organ of the American Institute of Accountants

Vol. 27

FEBRUARY, 1919

No. 2

Depreciation in Telephone Utilities*

BY WADE KURTZ

In no class of public utilities is there a more fertile field for speculation as to what depreciation includes and the annual amount to be charged against operating expenses to protect sufficiently the capital investment, while doing justice to the public interests, than in the telephone companies. The differences of opinion and practice vary all the way from the complete elimination of accrued depreciation as an operating expense to the setting aside of a reserve amounting to an annual charge of as high as ten per cent. of the plant value in certain isolated cases. In fact, the whole question of depreciation in telephone utilities is so debatable that no one can say that a certain rate of depreciation is correct under certain conditions.

Aside from errors in accounting principle and the elimination of depreciation for the purpose of manipulating the income account, there are numbers of very good and sound reasons for the various charges for accrued depreciation among telephone companies, the most important of which are the following:

I. The climatic conditions are so variable in different localities, and the plant being so largely exposed to the elements, there is an entirely different result for each locality.

II. The telephone business is so young, and has had such a remarkable growth, that it has not had sufficient time to give results upon which the courts, engineers and accountants can base a definite and final opinion.

*A thesis presented at the November, 1918, examinations of the American Institute of Accountants.

III. One company may have its plant largely of overhead construction, while others, especially in large cities, would be entirely underground. The latter being more permanent reduces the rate of depreciation.

IV. A plant situated so that it is in danger of extraordinary casualties, such as the flood loss in the spring of 1913 along the Ohio and Miami rivers, causes very excessive depreciation.

V. The depreciation is greater in smaller companies than in the larger ones, because as a rule the plant is not so well maintained and is constructed with cheaper and shorter lived material.

VI. The risk and contingencies are greater in a small plant than in a large one, thus causing greater depreciation, as there is not the average a larger company obtains. This is somewhat analogous to carrying one's own insurance instead of through an insurance company.

VII. In a small company the loss on account of inadequacy is much less than in a large and growing city. Stagnation of growth in a locality decreases depreciation because there is no inadequacy.

VIII. There is a wide difference of policy in the various telephone companies in their arbitrary distinctions between maintenance and depreciation charges. When maintenance charges are high, depreciation is decreased, and when maintenance is low, the depreciation is higher.

IX. As telephone plants tend to reach their final peak of stability, both depreciation and maintenance charges are gradually decreasing.

X. The quality of service which it is necessary to maintain affects depreciation. In some concerns where the very best service is not maintained, the plant can depreciate to the limit before replacements are necessary. In other localities this condition would not be permitted.

It can readily be seen that considering the foregoing reasons and their possible combinations, there is a large field for variation in the rates of depreciation used by the different companies. A large company may have as many variations in rates as it has exchanges, but it has the advantage of averaging the expense over its entire plant, and it is so handled on the general books for accounting purposes. Subsidiary records should be kept, however,

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showing the depreciation reserve and all charges against it by the various exchanges. This is essential for statistical purposes as well as for rate-making purposes before the utility commissions.

ELEMENTS OF DEPRECIATION

Inasmuch as the setting up of a depreciation reserve is intended to level the expenses by apportioning to each period its just share of the expense, the tendency seems to be to broaden the meaning of depreciation by including as charges against the reserve items which are not strictly the result of wear and tear but do result in a loss of plant values. These various elements of depreciation which are to be considered in arriving at a just rate in the telephone utilities are as follows:

- I. Gradual lessening in the value of the plant until it arrives at the normal value.
- II. Renewals and replacements.
- III. Extraordinary repairs.
- IV. Obsolescence.
- V. Inadequacy.
- VI. Municipal requirements.
- VII. Cost of recovering salvage and the removing of retired or abandoned properties.

All the above are causes for the perpetual decrease in plant values, and proper recognition must be given them before correct profits can be ascertained.

NORMAL VALUE

A vital phase of telephone depreciation, with which the average person is not familiar, is the normal value toward which an average plant tends to gravitate, beyond which the loss due to wear and tear does not go. In other words, the plant of a telephone company, in order to give efficient service, must be maintained on the average at about eighty per cent. of its original cost. When the plant is allowed to depreciate to approximately seventy-five per cent. of its cost, engineers seem to agree that the service is unsatisfactory, and, should the plant be allowed to decline much below that average, it will soon arrive at a point where the rendering of service is impossible and revenues will cease. It seems, therefore, that aside from a reserve for contingencies, a telephone company has no right to create a depreciation reserve for any larger amount than the difference between the original cost and

the normal value of approximately eighty per cent., which would be twenty per cent. of the cost of the plant. After this decrease in the average value of the plant has been provided for, the only just charges for depreciation would be for current renewals and extraordinary items.

The reserve thus set aside, while the plant is settling down to its normal condition, will never be used for replacements, and its only possible use is to keep the original investment intact. There are two possible dispositions of this reserve:

I. If there are extensions of plant needed, it can be used for that purpose.

II. If no extensions are necessary, the fund can be distributed to the stockholders as a part return of their capital investment.

In business practice the second method is never intentionally followed, although in many concerns it has been done unintentionally. As a rule, it is invested in plant extension, thus avoiding the necessity of borrowing funds for that purpose and at the same time maintaining the original investment.

RENEWALS AND REPLACEMENTS

While a large plant as a whole, if properly maintained, never depreciates below its normal value, it must not be overlooked that in spots the plant is continually decreasing in value until it must be renewed or abandoned, and at some time the whole plant will be replaced either in kind or by the substitution of a new unit, and provision must be made for this expense. The net loss will be the difference between the original cost of the plant and the cost of removal, less the salvage, which in the telephone business is a very large and important item. A great deal of the material recovered still has sufficient life remaining to warrant its being placed in stock and re-used in later construction of plant.

EXTRAORDINARY REPAIRS

The name "extraordinary repairs" is to an extent a misnomer, and as a result there is considerable confusion in the telephone companies as to just what this term is intended to include. The interstate commerce commission has defined the charges under this heading in a general way as follows:

The depreciation accruing in property which cannot be readily individualized, such as pole lines, wires, cables or other continuous structures, where expenditures for repairs or replacements of individual parts ordi-

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narily are not actually made until the later years of the life in service of such property, and when made may, therefore, be classed as extraordinary repairs.

In the *System of Accounts for Telephone Companies*, under the explanation of "repairs defined" the commission gives a more detailed statement of these charges as below :

I. Restoring to an efficient or proper condition buildings, structures or other units of property which have deteriorated.

II. Substituting, in order to maintain normal efficiency, new parts for old parts of continuous structures, such as pole lines, cables, wires, conduits, etc., where such substitutions do not amount to a practical replacement of any considerable length of such continuous structures.

III. Restoring the condition of property damaged by storms, floods, fire or other casualties.

IV. Recovering salvage and removing retired or abandoned property in connection with the above work.

It can readily be seen that, in the telephone business where the money is continually being put back into plant, this item of extraordinary repairs becomes most important.

The reason for not using the same accounting procedure for these charges as that in the case of other replacements—that is, construction and depreciation reserve accounts direct—is to avoid the inflation of the plant values on the books owing to the large amount of piecemeal re-construction. It is well known that building a plant by small units at a time will cost more than construction work on a large scale, but the nature of the telephone plant makes it imperative that a large part of the renewals be done piecemeal in order to maintain efficient service. It should not be forgotten, however, that the increased cost owing to piecemeal re-construction may be partly offset by the lower overhead charges on the work, such as interest on construction, engineering, etc.

This method is quite out of the ordinary routine of accounting because all extraordinary repairs are reported as a maintenance charge, and so entered upon the general books with the ordinary repairs, but at the end of each month a correcting journal entry is made crediting the total extraordinary repairs to account No. 611, "Repairs charged to reserves," and concurrently charged to account No. 102, "Reserve for accrued depreciation." On an

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expense statement the item would appear as an addition to maintenance and afterwards be deducted as below :

Supervision of maintenance	\$13,606.95
Repairs of aerial plant	80,236.11
Repairs of underground plant	2,534.88
Repairs of central office equipment	17,263.04
Repairs of station equipment	18,513.11
Repairs of buildings and grounds	1,157.54
	<hr/>
Total repairs	\$133,311.63
Less repairs charged to reserve	32,666.41
	<hr/>
Net current repairs	\$100,645.22

The title "extraordinary repairs" is misleading because a large part of the charges represents expenditures of an ordinary nature.

OBSOLESCENCE

Owing to the swift and constant progress of the telephone science in the past, obsolescence has been an item of considerable importance in its relation to depreciation, but within the past few years engineers and accountants have given it little consideration. It is, however, an element of depreciation which should be reasonably considered, as developments are continually taking place. The automatic and semi-automatic switchboards, as well as other improvements, are meeting with popular approval, but it is reasonably safe to assume that the present switchboards and other plant are efficient enough to warrant their use until the average life has expired. The present investment in switchboards is so great that a universal change to the automatic or semi-automatic would cause a tremendous loss to the telephone companies.

In considering obsolescence when arriving at a fair rate of depreciation, it would seem proper to eliminate any loss of magnitude, and should such a loss later occur, the interstate commerce commission would without doubt grant permission to capitalize the amount, and then amortize it over a period of years as described under the heading of "Extraordinary casualties and unanticipated reconstruction" in the commission's system of accounts.

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INADEQUACY

Inadequacy is one of the depreciation elements which is real and important, because it is continually being met today, more especially in the larger cities, where it is practically impossible for the commercial engineers accurately to forecast the growth of cities and more particularly the section of a city which will have an abnormal growth.

As an illustration, during the past few years the cities which were affected by the war orders have had a remarkable growth, and the telephone companies in many instances have been absolutely unable to meet the demands for telephones owing to the inadequacy of their plant. This has necessitated the removal of the old plant and a replacement with much larger units, the expense of which should be borne by the depreciation reserve. The anticipation of inadequacy always carries with it the hazard of building a larger plant than will be needed, and this also results in a loss of profits. Inadequacy is an element which is difficult to deal with, and good business judgment is about the only standard that can be taken in its consideration.

MUNICIPAL REQUIREMENTS

The interstate commerce commission recognizes that telephone companies are frequently put to a large expense by changes in popular demand or public requirements, and has included these charges in its definition of depreciation. This expense would include such losses as are caused by a city ordinance requiring the burial of wires in underground conduits, re-location of conduits to make room for subways, re-location of plant from one side of the road to another, etc.

COST OF RECOVERING SALVAGE AND REMOVING RETIRED OR ABANDONED PROPERTY

Inasmuch as a depreciation reserve is an accounting expediency intended to spread the plant expenses, it is proper that the interstate commerce commission should provide for the cost of recovering salvage and removing retired or abandoned property by including it as a part of the estimated expense for depreciation when setting up the reserve. These expenses are continually occurring in the telephone business and over a period amount to a large sum. The cost of removing plant taken out of service should include freight and cartage on the material

recovered. The cost of removal can no doubt be justified as a charge against depreciation reserve by considering that if the plant were not removed it would be abandoned, and thus become a charge entirely against the reserve.

When these charges are not provided for in a depreciation reserve, they should be charged as a maintenance expense under repairs.

METHOD OF COMPUTING THE DEPRECIATION RATE

The basis for arriving at a rate of depreciation is a life table of the various classes of telephone plant, of which there are about twenty, and such a table would contain the following information:

Class of plant.

Life in years of each class.

Net salvage in percentage of first cost.

Wearing value in percentage of first cost.

The life of any particular class of plant is an engineer's best estimate and is, therefore, approximate. By taking the book values of each class of plant and figuring the depreciation in accordance with the life table, a composite rate of depreciation is obtained.

DISTINCTION BETWEEN EXTRAORDINARY AND ORDINARY REPAIRS

In no phase of telephone accounting is there a more unsatisfactory condition than in the distinctions made between ordinary and extraordinary repairs. Telephone accountants are inclined to give general instructions as to classification of expenditures such as are given by the interstate commerce commission. As the employees in the field make the classifications, this policy has resulted in the shifting of the burden of decision from the shoulders of those who ought to know and decide to those employees who know the least about the distinctions.

So far as material is concerned, the issue appears to be clear-cut, as all short-lived parts are a just charge against ordinary repairs. They would include such items as the following:

Cords,

Fuses, carbon blocks, heat coils,

Resistance coils,

Switchboards, lamps and caps,

Switchboard resistance lamps,

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Jack sleeve springs,
Plugs,
Relay parts,
Ringing and listening key parts,
Switchboard number plates.

There can be very little material, aside from these short-lived parts, which can be charged as an ordinary repair, and the vast amount of repair expense consists of labor and expense for the following among other purposes:

- I. Cleaning and care of switchboards, main and intermediate distributing frames and central office apparatus.
- II. Cleaning and repairing removed bells, back boards, carbon blocks, protectors, etc.
- III. Cleaning and adjusting apparatus.
- IV. Cleaning subscribers' station equipment, including cleaning and inspecting booths.
- V. Adjusting relays and other parts of central office equipment.
- VI. Inspecting and cleaning manholes.
- VII. Testing cables for electrolysis.
- VIII. Repairing defective cable splices.
- IX. Coiling, sorting and splicing wire in stock.

The foregoing are merely indications to show that repairs do not refer to renewals, excepting parts such as have been listed, but are intended to cover labor and miscellaneous expenses used for keeping up the operating efficiency of the plant.

A telephone plant is composed of a multitude of small, delicate and expensive parts, which are included in the plant values upon which the monthly charge for depreciation is made, and as these parts are continually being replaced piecemeal, it is obvious that over a period of years a large part of the plant could be replaced in this manner. Persons unfamiliar with the telephone business and many in the business do not realize the magnitude of these renewals over a period of time, because they are individually small in both size and value.

These comments refer to such renewals as cross arms, insulators, relays, jacks, etc., which should be charged as extraor-

dinary repairs. This means that they will be charged against the depreciation reserve, together with the labor and expense consumed upon the work.

To state that a renewal of any long-lived part is a just charge against depreciation seems to be meeting the issue squarely, so that the employees can make a positive distinction instead of compromising as at present.

In some instances it would be necessary to make arbitrary distinctions. For example, in replacing wire, the limit of demarcation could be from one pole to another. The labor and expense would follow the same classification as the material used.

GRADUAL DECREASE IN DEPRECIATION AND MAINTENANCE

In attempting to arrive at a fair rate of depreciation for a telephone company at the present time, too much emphasis should not be placed upon the experience of telephone depreciation in the past, because both maintenance and depreciation have a tendency to be on the decrease. The decrease in repair and renewal charges and increase in life of the plant are caused by the average plant's taking on a more permanent and standard character than in the past. For instance, in all the larger cities underground construction is continually being increased, and the plant is not, therefore, subject to sleet storms, which have been the cause of tremendous losses in outside plant.

DEPRECIATION ON PURCHASED PROPERTY

Many large telephone companies are composed of purchased small companies, which when purchased are appraised at the present or depreciated value, so far as the plant is concerned, which is the only amount that can be capitalized in the plant accounts, the difference between the cost value and the appraised value being charged as intangible capital. It is apparent, therefore, that a telephone company soon arrives at a point where it has two values on the general books so far as the plant is concerned: constructed plant at cost value and purchased plant at depreciated value. In a few years there will be a further confusion by extraordinary repairs having been made on the property purchased. As in the telephone business the plant soon loses its identity so far as cost is concerned, when the time arrives for the purchased property to be renewed there is a tendency to forget the value at which it was placed on the books and to

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credit plant with the same value as properties constructed. This has the effect of charging the depreciation reserve with more plant than was originally capitalized.

This is an error of principle easy to make, and the only method of avoiding it seems to be when a plant is purchased to capitalize it in the plant accounts at the original cost figure and set up a reserve for the depreciation. This would have the accounting effect of capitalizing the plant purchased at the appraised value, and when the plant is retired there should be sufficient reserve to take care of the plant retirement on the same basis as all other plant. In order to follow this procedure permission of the commission must be secured.

EXTRAORDINARY CASUALTIES AND UNANTICIPATED RECONSTRUCTION

When an extremely large loss is experienced, for which no provision has been made in the depreciation reserve, the commission has allowed the privilege of carrying the charge as a deferred asset and amortizing it over a period of years, providing the consent of the commission is asked. As an illustration of such a loss in plant value, should the city of Chicago decide to build a subway, it would compel the Chicago Telephone Company to reconstruct its conduits, and would necessitate a large loss.

DEFERRED MAINTENANCE

In many telephone companies it frequently happens that current repairs cannot be made for financial reasons, which is one way of stating that repairs are allowed to accrue in the same manner as depreciation. In order properly to reflect such a condition on the income statement, it is necessary to charge maintenance with the estimated amount of such repairs and credit a reserve entitled "deferred maintenance." Otherwise, the expenses for such a period would not represent the actual operating results.

COST OF PLANT WHEN RETIRED

A great difficulty in the telephone business is to ascertain the original cost of plant when it is retired in order to credit fixed capital with the proper amount. It is a comparatively simple accounting problem to keep the exact cost of plant when going into service, but, as soon as plant is completed and placed in the fixed capital accounts, it loses its identity; and in later

years, when the same plant is retired, it is practically impossible to find the cost of it from the plant records, with the exception of a few large units, such as switchboards and buildings. This condition has led to the use of a somewhat modified replacement figure for the retirement of plant, which is wrong in principle, because it does not take into consideration the varying conditions of capitalization, such as the cost of labor and material. What should be done is to prepare unit costs for periods during which the costs of construction are approximately the same and use these displacement figures for the estimated period when the plant will be retired.

Another difficulty is to record all the plant retired so that it will be reflected on the books. This applies largely to outside plant. For instance, in the Ohio river flood many miles of pole lines were destroyed, and to obtain the displacement figures, the only possible method was by an engineer's estimate, which was, of course, approximate.

ACTUAL LOSS ON PLANT RETIRED BY CASUALTIES

An important feature to be kept in mind when calculating the loss by sleet storms, floods, etc., is that the real loss to the company will be only the unexpired life of the plant which is destroyed. If a pole line has an average life of, say, ten years, and the line is destroyed by storm at the expiration of five years, the actual loss will be only the unexpired life of five years, or half the original cost. This point is self-evident, but is frequently overlooked in practice.

DEPRECIATION ON MATERIAL RECOVERED

On all salvage recovered there is a certain amount of accrued depreciation, but it is placed in the material account at the cost figure as a matter of accounting expediency. It is manifestly impossible to take the salvage in at the depreciated value, because there would soon be a stock record of all items priced at different figures. In the telephone business salvage is a very large item, and at first this would appear to be a serious error of accounting, but in fact it is not, because while the material was being used in the plant the depreciation reserve was being set up each month to cover plant depreciation, and when salvage is taken out of plant and placed in the material account, there is set aside sufficient reserve to offset the decreased value of the salvage.

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It is to be remembered, however, that this method overstates the material account to the extent of the accrued depreciation.

TRANSFER OF SUPPLIES

In a large plant consisting of many exchanges, there is a continual process of exchanging supplies from one exchange to another, which has no bearing on the exchange conditions unless some of the supplies have had service and are depreciated in value. For instance, if one exchange had used a switchboard for five years, and then had replaced it by a new one, the old one being transferred to another exchange, it would be unfair that the second exchange should stand the entire depreciation when the switchboard was junked. When such transactions occur, a transfer report should be made giving each exchange the just proportion of the depreciation charge. On smaller items this is hardly worth while, but on large units it should be considered for statistical and rate making purposes.

STATION REMOVAL AND CHANGES

One of the largest expenses of the telephone business is the loss due to station removal and changes, which also entail a large loss in the plant values. This loss is not considered as depreciation, but is handled separately under current maintenance. The plant loss is due to the drop wires, inside wiring and interior block wires, which are abandoned on account of being taken out of service when a station is removed. Should an abandoned station be reinstalled, this part of the plant would again be taken up as a fixed asset upon the books of the company.

Under this method there is always a large amount of the plant owned by a telephone company which is not reflected in the fixed capital accounts but is a contingent asset to be taken up on the plant records if the stations are re-used.

STABLE, GARAGE AND EQUIPMENT DEPRECIATIONS

The depreciation on the stable, garage and equipment should be carried as a separate reserve, as these items are of a different character than the telephone plant proper. A separate rate for each class should be used in arriving at the annual charge.

REALIZED DEPRECIATION NOT COVERED BY RESERVES

In past years many telephone companies failed to set up a reserve for accrued depreciation, and when the uniform system of accounts was established, January 1, 1913, the interstate

commerce commission provided for this by creating account No. 413, "Realized depreciation not covered by reserves." All realized depreciation—that is, plant taken out of service—for which no reserve had been created up to January 1, 1913, should be charged to this account. It is an accumulating account for the year, and at the end of the year should be charged against surplus.

It can readily be seen, therefore, that a concern which did not provide for depreciation before January 1, 1913, and did so after that date, when it displaces plant, will have a gradually diminishing charge against this account and an increasing charge against the depreciation reserve. The following method of arriving at this distinction between the two accounts has been approved by the commission:

<i>Year</i>	<i>Per cent. of current displacements charged to reserves</i>	<i>Per cent. of current displacements charged to account No. 413</i>
1913	5%	95%
1914	10%	90%
1915	15%	85%
1916	20%	80%
....
1931	90%	10%
1932	95%	5%
1933	100%	0%

The above apportionment is worked out upon a twenty-year life and an annual depreciation rate of 5%.

The use of this account is left somewhat to the discretion of the company, but when used on the basis described above it is inclined to work a hardship upon the corporation, as in the early years it doubles the provision necessary for depreciation by making one charge to current operations for the current accrued depreciation and another against surplus for the realized depreciation not covered by reserves. Unless a company has an exceptional net income, the provision for this account is quite likely to cause a deficit and at the same time set up a large reserve which will never be used.

This condition could be overcome by decreasing the annual rate of depreciation, but this is inadvisable on account of the precedent established by using a rate which is lower than the actual rate, especially for rate making purposes.

Depreciation in Telephone Utilities

"Depreciation is not a matter of formulas, but there must be a reasonable judgment, having its basis in a proper consideration of all relevant facts"; and in its final analysis, what should or should not be charged against depreciation reserve depends entirely upon what the reserve is set up to cover. At the very best, the fixing of an annual rate of depreciation is an estimate, and as telephone accounting becomes more accurate greater emphasis should be placed upon the actual results as shown by the records in arriving at the rate of depreciation.

Accounting Control for Company Store or Commissary*

BY W. P. FIELD

A practical method of accounting control for the retail store is here presented. The system as outlined has survived the test of many years, and experience has demonstrated its practical value in stopping leaks and securing for clients a reasonable execution of their mandates, in the management of this very necessary but much neglected department.

The plan starts with the receipt of the invoice, which, as it comes in from the mail, should first be recorded in an invoice record. This is a memorandum book serving to keep pending transactions in hand until ready for the bookkeeper. For a plan of ruling see exhibit A. The columns explain themselves. The plan of numbering is important, as the invoice number plus the line number becomes the lot number of the article, which is to be placed, first on original packages, and subsequently on contents.

The lot number is a device whereby goods are so marked that they can be quickly and accurately identified with purchase, cost, price, stock and inventory records, and whereby their age can be determined at a glance. It is a composite number made up of three parts—the first giving the approximate date of the warehouse receipt, the first and second together the invoice number, and the last the item on the invoice. The detail is as follows:

Prepare a list of the twelve months of the year, repeat it eight times and number consecutively from 1 to 96. Use these key numbers for numbering invoices in the invoice record. The first invoice record in January of the first year of the system becomes No. 101, the first 1 indicating the month, the second 1 the consecutive number in the month. The first invoice in February becomes 201; the first in January of the second year 1301, the second 1302. Follow this through for eight years. The last December is 96 and the first invoice recorded in that month will be 9601. By this time, there should be no goods left in stock from the first year, so that the plan can begin again with number 1 for the key.

*A thesis presented at the November, 1918, examinations of the American Institute of Accountants.

INVOICE RECORD

EXHIBIT "A"

The number 3541 on an invoice would mean that the invoice was the forty-first to be recorded in November of the third year of the system. The number 6314 would indicate the fourteenth invoice of the sixth March. As already noted, the last units of the lot number indicate the item on the original invoice. As an example, the number 162445, noted on an article, would mean that the article was received in April of the second year of the system, and would be found on the forty-fifth line of invoice 1624. It should be noted that the number 162445 is read, sixteen, twenty-four, forty-five, and not one hundred and sixty-two thousand, four hundred and forty-five.

As soon as recorded, the invoice should go to the purchasing department for approval as to prices, and from there to the cost clerk, where calculations are revised and the laid down unit cost is established. From here it passes along to the proper authority, who notes on the margin the retail price at which the goods are to be sold, having in mind the expressed policy of the company as to the profits and the past performances of the store as shown by the monthly financial statements.

As soon as prices have been established, the merchandise covered by the invoice is "taken up"—that is, it is billed at retail value against the warehouseman in charge of the deposit that is to receive the goods. The bill is prepared and put through in every way just as if an actual sale of the goods had been made to the warehouseman. The detail shown on the bill is but a repetition of the detail on the original invoice, except that retail values are substituted for costs, and, in addition, the lot numbers are shown on the margin. All goods are billed in triplicate, a bill for each invoice. The day the goods arrive, the warehouseman receives his bill, the duplicate goes to a suitable file in the office and the third goes to the accountant, together with the original invoice, to be recorded in the purchase record, registered in the bill register and posted to the stock ledger.

The purchase record is a loose-leaf book, suitably ruled, with the sheets alphabetically arranged, and with additional special tabs for groups, such as sugar, rice, soap, etc. For detail of ruling see exhibit B. A sheet is provided for each article. The detail of each invoice, together with that of the corresponding bill, must be posted to these sheets—thus in a period of time working up a complete history of each article carried. The great value of the

record becomes at once apparent. Given the past performances and the present stock, the future can be gauged with great accuracy, thus providing the purchasing department with the exact information necessary to assure a sufficient supply at all times, and leaving no excuse for overstocking. In this detail of company store management is perhaps the one big idea in which the commissary differs from the average town establishment, and it makes the former an infinitely bigger problem. If the town merchant finds himself overstocked, he reduces prices and converts an error into an asset by obtaining the fame that goes with good goods and low prices. If he finds himself going a bit short, he covers as far as possible on his neighbors, and saves his face by increased prices. His customer's servant crosses the street and gets the needed article, and home life goes along as usual.

Not so with the company store manager. If he overbuys he is in a dilemma. If he reduces his prices he simply makes less profit on his sales and raises a rumpus further down the line by creating a decreased demand where it is equally hard to handle. Again, if he underbuys, he is at his wits' end to adjust himself, as the short article—flour, potatoes, lard, coffee, codfish, be it what it may—will cause no end of immediate trouble in the community, and at the same time create another "out" in some neighboring line which was not prepared to care for the increased demand. The columns on this sheet explain themselves generally. The three columns for selling prices are to cover the different units at which sales are made. Thus, condensed milk calls for a price per tin, per dozen and per case. The per cent. column is for recording the ratio the loading bears to the retail price. By way of summarizing the effect of the purchase record, it can be stated that it puts the "buyer" in his place, and keeps him there; his blunders become self-evident, and in case of need his services can be dispensed with and the work carried along by the next in line without difficulty.

The bill register is kept by the bookkeeper. In it are registered all bills and invoices received from the purchasing department, as well as others from the warehousemen covering transfers to retail departments. These entries should be made in groups, so that the totals will give at the end of the month the needed statistics. For instance, the first page can be made a record of grocery purchases, the second dry goods and the third hardware,

Accounting Control for Company Store or Commissary

the next sundries, following with groups covering issues by the different warehouses, etc. The act of billing produces the loading which is the difference between the cost value and the retail value of an article. The amount of it is more or less, according to the policy of the company. The figures produced by the bill register at the end of the month give the cost, retail value and loading of each group of articles. The loading is always calculated as a percentage of the selling value. Given the retail value of the stock in any department, a reference to the statistics will immediately give the percentage of loading, and the cost of the stock is immediately produced. At the end of the month, the general ledger of the store department gives the retail value of the stock in hand, and a rapid calculation shows how much loading must be set aside to reduce it to cost. This much done, the balance remaining in loading account is the gross profit for the month. From this amount, expenses, allowances, rebates and shorts are deducted, and the net profit for the department is produced. For detail of form see exhibit C.

The stock ledger is a loose-leaf ledger, with the sheets arranged in groups indicated by tabs. An account is kept with each article billed to the warehouse, quite the same as accounts are kept with individuals in any auxiliary ledger. Each account is charged with the retail value of the corresponding article billed in as per warehouse receipts, while the same account is credited with the issues billed out to retail departments. The balance in any account is the retail value of that article in stock.

A trial balance is taken from this ledger at the end of each month, which must be in agreement with the controlling account in the general ledger. Constantly during the month, tests are being made of the accounts, overs and shorts being billed in as additional purchases, or out to profit and loss (shortages) as the case may be. The advantage of this form of stock ledger will be at once apparent. It cannot be forced. It is impossible for the warehouseman to get a credit to an article without at the same time producing an acceptable charge against another department. Likewise an invoice cannot be credited to a shipper without the corresponding debit being made against the goods. This particular idea is very important as it eliminates at once the possibility of invoices getting through unless value has been received.

Approved vouchers = Invoices

G = Groceries

H = Hardware

D = Dry goods

EXHIBIT "C"

Accounting Control for Company Store or Commissary

As the purchasing department bills new goods to be received against the warehouseman, so does the warehouseman prepare and cause to be recorded bills made by him covering transfers to retail departments. The warehouseman is provided with a suitable book in which he notes all bills received and the value, also at retail, of all goods billed out. The balance must agree with the controlling account of the warehouse in the general ledger. Upon the receipt of goods from the carrier, the warehouseman is compelled to be vigilant. Any slip on his part will produce a difference between stock ledger and inventory which will be difficult to explain. All shortages must be carefully noted and billed back to the accountant to be charged off, or placed in claim account, or deducted from shipper's invoice. As stock is received, all original packages are marked on the outside with the lot number shown in the bill. When original packages are opened in the retail departments, the contents are marked with the lot number and retail price. In the retail grocery departments it is not practicable to mark a few standard articles, such as sugar, beans, potatoes, codfish, lard, rice, ham, bacon, salt pork, condensed milk, beer, sardines, etc. These goods, being few in number and of great movement, a blackboard is provided and placed in a prominent place, where prices may be seen by all. Care should be taken to use good counter-scales, and in a suitable place locate an extra one, where the public can test the packages at pleasure—the idea being to place every possible means of self-protection in the hands of the customer.

As goods are delivered to retail departments, they are accompanied by bills. These are recorded by the clerk in charge in a blotter provided for the purpose—a book in which is noted the date, number and amount of bills covering goods received from the warehouseman figured at retail prices. In this book is also noted the daily product of the cash register. The account is opened with an inventory. The balance in the blotter at any moment is stock on hand at retail values. The difference between inventory and blotter is an "over" or "short." If an over has been produced, a bill is prepared in the office charging the department and crediting "overs." If a shortage has been produced, a ticket is prepared, and after being properly approved it is rung up and deposited in the cash register like any other credit due to the clerk. Inventories are taken frequently by independent clerks.

The entire stock being divided up into small departments, it is but a one or two hours' job to list the goods in any one clerk's account. To price the goods is easy, as the retail prices are notorious—in fact, at the tip of the tongue of every clerk—while calculations are rapid as prices are as a rule multiples of five. It is customary to take some departments weekly, much depending on past history. Dry goods and hardware are as a rule taken every two or three months, hats and shoes monthly.

A cash register of simple make is given each clerk. All credits of whatever nature are rung up like cash. If it is a credit sale to an officer, the order is rung up for its full retail value. If there is a rebate for a quantity sale, it is noted on a sheet and registered at the end of the day. If there is a credit for breakage or damaged goods, if goods are taken from stock for store expenses, if there is a credit sale to the company, or be it what it may, the token in the shape of a ticket is invariably rung up. All sales other than to officers and to the company should be for cash. Laborers and employees should be advanced cash on demand, on account of accrued salary, at the main office. It is much cheaper to record a cash advance once a day or less to a laborer than to record many credit sales. Also the laborer is better satisfied. The only objection to cash is where the policy of the company is to sell goods at a higher level than is current in the district. When this is the case, suitable plans for due bills can be worked out without interfering with the main idea.

The operations of the retail departments are closed for the day at about 2 p. m. At this hour trade is slack, the light good, and no inconvenience is caused by treating sales made in the late afternoon as of the next day. Having taken a reading of the cash register, the clerk proceeds to count his cash and list the tickets, orders or tokens that make up the day's transactions. All being in order, separate packages are made of the cash and tickets, one going to the cashier and the other to the transfer clerk together with a report prepared on a form similar to exhibit D.

We have now come to the last detail in the ceaseless round of store activities of immediate interest. We have seen the goods arrive and have noted how they are taken up and passed through the warehouse and retail store, and beyond to the hands of the customer.

We now treat of the transfer clerk. His is an important position. He manages the clearing house of the business. To his cage come all the packages from the retail departments containing the tickets as rung up in the cash registers. These tickets are carefully checked against the statements and passed along to the baskets in suitable groups until all packages have been opened. It is perfectly clear, then, that the tickets in the various baskets must equal the total amount rung up on all the cash registers for the day. One basket contains all credit sales to officers, another all rebates, another all shortages, etc., etc. These baskets are turned over to able assistants who again sort them for billing out. The tickets in the officers' basket are now arranged by name, and then a bill is prepared in duplicate. It may be that an officer has made purchases in a dozen departments for the day, but in the end all his tickets come together in the hands of one clerk and they are billed out together. In this way the tickets are finally billed out or passed along by the clearing department, and the net of the day's operation is a report giving the totals to be credited to departments and charged against the cashier, the officers' ledger, expenses, inventory, shorts, rebates, leakage and breakage, etc., etc.

In passing, it should be stated that the group of transactions here described appertains particularly to groceries. For the handling of most articles of hardware and dry goods, it is usually sufficient to take up purchases at retail prices direct in the retail departments—this of course under the eye of a competent supervisor. When the warehouse is cut out, there will be no need for a stock ledger, nor is a purchase record required. In handling the drug store, no trouble will be found if distinction is made between the prescription and proprietary departments. The meat shop is a problem needing special study, but here, too, it is practicable to apply the general idea as outlined. Of all the situations in which the method is of value, perhaps the most noted is in the management of a branch store located at a distance from the warehouse, where everything that has been said in regard to the retail store can be adapted. In short, it has been demonstrated that the plan has almost universal application and only meets its Waterloo when it tackles the ice man.

A Woman's Mind as Applied to Accountancy*

BY LENA E. MENDELSON

There seems little doubt in the minds of thinking men and women that the degree of education and economic opportunity to be allowed to women is clearly evidenced in the present day attitude of universities, technical schools, business and professions of recognized standing; and that the measure of women's intellectual attainments has ceased to be a mere matter of conjecture. Inevitably there will be growing opportunities for women who qualify, and the number already engaged in business and professions will be considerably increased. And, since women are entering nearly every profession, it is reasonable to assume that they will become associated with the practice of accountancy. A few women are already in practice, and a few others have seriously taken up the study of accountancy, with the view of becoming practitioners at some future time. These students, in general, stand well in their classes, and so far they seem to absorb the gist of what they are taught.

Accountancy, as a recognized profession, is still comparatively young in this country, but it has already set high standards—largely through the organized efforts of the American Institute of Accountants. More is now expected of the accountant than ever before, and because many of the profession have met this broader demand and have shown that the services of the practitioner must extend well over the field of business activity, the candidate for professional standing must have in his mind's eye a constantly growing ideal of ultimate achievement.

Much has been written in recent years, by men who have made reputations as accountants, on the desirable and necessary qualifications of a successful practitioner, and, while each writer expresses himself in his own style, the gist of it all is this:

That the successful accountant must possess character, integrity, personality, tact, education, ability, technical training and practical experience. In addition to all these qualifications he must have a mind that can analyze and see through as well as into conditions.

*A thesis presented at the November, 1918, examinations of the American Institute of Accountants.

The reasons for all this are very apparent.

Character, integrity, personality, tact, education and ability are essential to real success in any profession, and there is no reason why accountancy should be excepted; and, since these various qualifications are not peculiarly restricted to men, it is reasonable to assume that women can measure up to the required standard on these counts.

An analytical mind, combined with technical training in accounting theory and practice, and business experience may easily be termed "an efficient combination."

Technical training in accounting theory and practice may be acquired to a considerable degree by either men or women of intelligence and education who have a liking for accountancy.

An analytical mind must be possessed. It may belong to men and women, and may be cultivated to a high degree.

Practical experience that extends well over the field of business activity becomes an accountant's qualification only after years of contact with and observation and study of various types of business organization. Of course, the woman in practice has not yet accumulated that complete experience in the large sense of this phrase; but she hopes to grow as the years pass, and, on the theory that the fittest survive, she will absolutely need to keep growing in order that she may come up to the required standard of professional efficiency.

The educational and technical training for accountancy involves too much work of a serious nature to hold the woman who is not in earnest, and who is not stimulated by natural love of and interest in this science. The unfit naturally drop out after the first year of study.

It is a long way from the balancing of the books of small shops to the preparation of a complete set of financial exhibits for a large mercantile or manufacturing corporation, but even that distance can be spanned. Constructive work, study, time and experience will do it.

To become an accountant one must know the theory of accounts. The principles of the theory of accounts are fixed, but at the same time are susceptible of different methods of application; and an analytical mind will consider these various methods as worthy of consideration on their individual merits. Specific cases require specific remedies. Several of the best known writers

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on corporate organization and accounting say that in the treatment of many corporate transactions practice—and good practice—is not uniform, although the final result is, of course, the same. This is just as applicable to a partnership or a single proprietorship.

The analytical mind, equipped with technical knowledge, will clearly see the relation of the profit and loss phase of any enterprise to the problem of valuation, or, in other words, the causes affecting net worth, and will reach conclusions in logical sequence.

To cite a few typical examples :

Depreciation, so highly important in its effect on valuation and profit and loss is, in turn, affected by many factors; and these factors enter into the rate and treatment of depreciation. The balance-sheet may show several kinds of fixed assets, such as brick buildings, frame buildings, machinery, etc., each requiring different treatment so far as rates are concerned. It may also show intangible assets, such as patents and leasehold premiums which diminish proportionately to the lapse of time, and assets, such as ore bodies, which diminish proportionately to their consumption as an element of production.

On the other hand stock-in-trade is not regularly affected by depreciation, and it must therefore be valued on a specific basis—that of its purchase or wholesale market price and according to well established practice either at cost or market, whichever is the lower. The equilibrium of relationship between the profit and loss summary and balance-sheet would be maintained, no matter how the stock-in-trade were valued, but valuation at the selling price would result in taking into the current period profits on sales not yet effected—and this is not sanctioned by good practice.

Again, the analytical mind must clearly see the difference between a sinking fund and its related reserve. The fund is actually set aside out of assets, usually added to at regular intervals and accumulated at interest for the purpose of meeting a debt or replacing wasting assets. When accumulated in full, it represents the means of liquidating debt or replacing assets. A reserve, on the other hand, is simply a book account. If it is a depreciation reserve, it is set up before the current profit and loss account is closed into surplus. If it is a sinking fund reserve, it is taken out of the surplus after the closing of current profit and

loss. It is set up to indicate the need of making provision for payment of a debt and is separated from general surplus so that it may not be considered available for dividends or other general needs.

In addition to understanding principles and seeing through conditions as reflected by various accounts, the analytical mind will focus on the situations it meets and soon learn that each case requires special treatment, and that the accounting methods which would solve the problems of one organization may prove wholly inadequate when applied to different conditions.

Depreciation and Depletion in Relation to Income Tax Returns*

BY GILBERT NELSON

Before commencing an essay on the subject of depreciation and depletion, it is advisable that the writer should set forth definitions of these two terms as they are understood in the income tax law.

Depreciation is the amount of the decrease in value of physical property caused by wear and tear due to the use to which such property is put.

Depletion means the reduction in value of properties, such as mines, timber limits, oil and gas wells, etc., owing to removal of natural resources.

DEPRECIATION

The most familiar examples of physical property are buildings and machinery. If buildings and machinery would of themselves stay good and efficient for certain known periods and then cease to exist, the subject of depreciation would be simple; but everything in this world either grows or decays, and therefore buildings and machinery must be kept up by renewals and replacements which of themselves prolong the life of the assets. Suppose a period of ten years was the known life of all buildings and machinery—then by dividing by 10 the yearly depreciation would be known. However, the renewals and replacements add to the life of the assets, and it is the life upon which the income tax law says the rate of depreciation must be based. As a guide in this matter, the law says that the depreciation for a specified year is the loss from wear and tear caused by the use to which the property has been put during that year, which has not been made good through expenditures for renewals and replacements and repairs deducted under the heading of expense for maintenance and operation. This means if the life of a machine was 10 years it is not permissible to write off one-tenth each year for

*A thesis presented at the November, 1918, examinations of the American Institute of Accountants.

depreciation and also include in maintenance and operation the cost of renewals and replacements and repairs which appreciably prolong the life.

The cost of incidental repairs which neither add to the value of the property nor appreciably prolong its life, but merely keep the machine in an ordinarily efficient operating condition may be deducted as an expense.

The depreciation—that is the amount measuring the decline in value of the physical property due to exhaustion, wear and tear—must be charged off on the books.

The particular manner in which the amount shall be charged off is not material so far as the law is concerned, except that it must either be deducted directly from the book value of the assets or credited to a depreciation reserve account, and as such be reflected in the annual balance-sheet.

From an accounting point of view a reserve for depreciation should be set up.

No definite rate has been fixed for computing the allowance for depreciation on any class of property subject to wear and tear. The rate is based upon the life of the property. The matter of obsolescence is not to be taken into account, as when the property becomes obsolete a deduction for the loss sustained thereby will be allowed. The amount of this loss is the difference between the cost on the one hand and on the other any salvage, plus the amount of depreciation previously charged off, or which should have been charged off.

So far we have only considered cases where it is possible to get the actual value of the assets to be depreciated. However, there are many cases where the valuation cannot be so exact, as in the case where real estate and buildings have been acquired for a lump sum, no segregation having been made of the cost of the buildings as separate from the cost of the ground on which the buildings stand. The law provides for such cases in the following manner, viz.:

In cases where the actual cost of the buildings or improvements at the time they were taken over can not be definitely determined, it will be sufficient, for the purpose of determining the rate of depreciation to be used in computing the amount which will be deductible from gross income, to estimate the actual value at the time acquired of buildings and improvements if acquired

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after March 1, 1913, or the fair market price or value as of that date if the property was acquired prior to March 1, 1913, the value in either case to be reduced by the amount of depreciation previously sustained.

The above rule applies where the improvements purchased with the real estate continue to be used; but where the improvements are torn down it will be held that there was no deductible loss. In such case it will be held that the value of the real estate, exclusive of the old improvements, is equal to the purchase price of the land and buildings.

We now come to the consideration of cases where old buildings are demolished or old machinery is scrapped, etc. Article 155 gives us a guide in this matter.

The deductible loss is to be found in the following manner: from the original cost deduct the salvage if any and the depreciation which has been charged off or should have been charged off during each year prior to its destruction. It will be noted that it is not so much the question as to how much depreciation has been charged off in previous years as the question of what amount should have been charged off.

It may be assumed that in the great majority of cases the term machinery covers a number of machines having varying years of life, and that depreciation has been calculated at a flat rate. Now when we commence to calculate the depreciation on a particular machine it would not be proper to apply the flat or average rate. Suppose we had two machines: one costing \$3,000.00 with a life of 10 years, and one costing \$6,000.00 with a life of 20 years. The depreciation was reckoned at \$900.00 per annum, a flat rate of 10%. The 10% would be applied correctly to the \$3,000.00 machine, but the rate of the \$6,000.00 machine was only 5%. This is only a simple illustration to show that the depreciation when scrapping or otherwise disposing of machinery must be calculated on the wear and tear of the particular machine and not on the average wear and tear of the whole plant as set forth in the flat rate.

There are many concerns which show depreciation written off during the last year or two, but previous to that no proper attention was paid to the matter. In such cases it would not be proper to decide off-hand that no depreciation had been allowed, for an examination might show that though no depreciation, as such, had

been written off, still there had been renewals and replacements charged directly against operations amounting substantially to the amount of depreciation chargeable against such years. In such a case the phrase in article 162 would apply, viz.:

"Amount of depreciation charged off or which should have been charged off."

Article 165 gives the procedure to be followed in cases where by underestimating the life of the property or overestimating the rate of deterioration an amount in excess of the yearly depreciation has been taken. The rate applicable to future years should at once be reduced and the balance of the cost of the property not provided for through a depreciation reserve should be spread over the estimated remaining life of the property.

It would be only reasonable to assume, should it develop that the rate of deterioration had been underestimated, that adjustment could be made upon the same lines as above.

In making such adjustments one would have to be prepared to show that the original rates were made in good faith, and that it was only through later and more complete knowledge that the rate now claimed was established.

Depreciation set up on the books and deducted from gross income cannot be used for any purposes other than in making good the loss sustained by reason of the wear and tear of the property with respect to which it is claimed.

A deduction claimed as depreciation cannot measure a loss and at the same time be used in the payment of dividends.

Investments made in extensions, additions or betterments of the company's own property, representing part or whole of the depreciation reserve account will not be considered a misuse or diversion of the depreciation deduction otherwise allowable.

This clause of the law appears somewhat ambiguous, and in my opinion means that money set aside for reserve for depreciation may be used for extensions, additions or betterments of the company's own property.

DEPLETION

The term depletion is used in regard to the decrease in natural deposits such as are found in oil and gas wells, mines, timber limits, etc.

The theory of the income tax law is that through an aggregate of annual depletion deductions the owner or operator shall secure

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the return of the amount of capital actually invested or an amount not in excess of the fair market value, as of March 1, 1913, of the properties owned prior to that date.

OIL OR GAS PROPERTIES

For the purpose of determining the amount of capital to be returned through annual deductions, operators may be divided into two classes: operators who own the fee and operators who own a lease or leases.

Take first operating fee owners. The amount returnable through the aggregate of annual depletion deductions is the fair market value of the property (exclusive of the amount of physical property) as of March 1, 1913, if acquired prior to that date, or the actual cost of the property if acquired subsequent to that date, plus, in either case, the cost of development (other than the cost of physical property incident to such development), up to the point at which the income from the developed territory equals or exceeds the deductible expenses. After which time such incidental expenses as are paid for wages, fuel, repairs, hauling, etc., in connection with the drilling of wells and further developments of the property at the option of the operator may be deducted as an operating expense or charged to capital account. If the decision is made to charge such incidental expenses to capital account, such expenses as are represented by physical property may be taken into account in determining a reasonable allowance for depreciation during each year until they have been extinguished. The law specifically says that in the case of a going or producing business, the cost of drilling non-productive wells may be deducted from gross income as an operating expense.

In determining the amount of capital to be returned through annual deductions in the case of a lessee, the capital is the amount paid in cash or its equivalent as a bonus or otherwise by the lessee for the lease, plus all expenses incurred in developing the property (exclusive of physical property) prior to the receipt of income therefrom sufficient to meet all deductible expenses. After this, all incidental expenses in the drilling of wells and further development of the property can be treated in the same manner as outlined for the operating fee owner.

After deciding upon the capital to be accounted for by annual depletion deductions, we now consider the manner of ascertaining the annual depletion.

The owner or lessee must make an estimate, subject to the approval of the commissioner of internal revenue, of the probable quantity of oil or gas contained in or to be recovered from the territory with respect to which the investment is made. The invested capital (ascertained as outlined in preceding paragraphs) will be divided by the number of units of oil or gas shown in the estimate referred to above, as submitted to the commissioner of internal revenue, and the quotient will be the amount of capital invested in each unit recoverable. This quotient when multiplied by the number of units removed from the territory during any one year will be the amount which may allowably be deducted from the gross income of that year on account of depletion of assets or as a return of invested capital. Annual deductions for depletion may be made on this basis, until the total of such deductions equals the amount of capital invested.

There is a provision in the law which makes it imperative that an accurate ledger account be kept to which shall be charged, in the case of operating fee owner, the fair market value, as at March 1, 1913, or the cost, if purchased subsequent to that date, of the oil or gas property, plus cost of development (other than cost of physical property), up to the point of expense paying production; and in the case of the lessee the amount actually paid for the lease, plus cost of development (other than cost of physical property), up to the point of expense paying production. This account can be credited direct or a reserve for depletion can be set up and credited with the amount claimed and allowed each year for depletion. When the credits or reserve account equal the amount of the charges of this account no further deductions for depletion will be allowed.

In those cases where the quantity of oil or gas in the property cannot be determined with any degree of certainty, the basis of deduction for depletion or return of capital will be the reduction in flow and production as compared with the preceding year.

The reduction in flow, if any, of new wells or new groups of wells brought in during the taxable year is ascertained as follows:

The well or wells should be tested as soon as they have reached the stage of settled production or regular flow, and then tested again at close of taxable year. Any decline in flow so indicated will be reduced to a percentage basis and a like percentage of the capital invested will constitute an allowable deduction.

Depreciation and Depletion in Relation to Income Tax Returns

MINES

A distinction is made between owners and lessees.

Mine owners

For the purpose of determining the amount of capital to be returned through annual deductions, if the property was acquired prior to March 1, 1913, the salable value, en bloc, of the entire deposits of minerals contained in the property as of March 1, 1913, must be taken. Cost of improvements and developments must not be taken into account. This estimate must in all cases be subject to the approval of the commissioner of internal revenue.

If the fair market value as of March 1, 1913, cannot be ascertained, the original cost of the mineral deposit may be taken, allowance being made for the minerals which may have been removed prior to that date.

Where a mineral property was acquired subsequent to March 1, 1913, the actual cost may be taken. The commissioner of internal revenue has the right to inquire into the purchase to ascertain if there was a bona fide purchase, and to determine that there was no fictitious or inflated price.

Lessees

A lessee is not entitled to any depletion deduction as such, but if a lessee, in addition to royalties, pays a stipulated sum for the right to explore, develop and operate a mine, such sum may be spread ratably over the estimated units in the mine, and thus determine the amount of invested capital or bonus payment applicable to each unit.

We now consider the manner of ascertaining the annual depletion. This method will be followed annually until the aggregate of the amounts claimed and allowed for depletion equals the sum of the invested capital, after which no claim for depletion will be allowed.

Owners

The en bloc value, determined when ascertaining the invested capital, divided by the number of units contained in the property, as shown in the report to the collector of internal revenue, will determine the amount of capital applicable to each unit. The amount of capital thus shown multiplied by the number of units

mined and sold during the taxable year will determine the sum which may allowably be deducted from the gross income of that year on account of depletion.

Lessee

When the amount of the invested capital—that is, the amount invested in the bonus—is divided by the number of units contained in the mine as shown in the report to the collector of internal revenue, the quotient will be the amount of capital invested in each unit. This quotient when multiplied by the number of units mined and sold during the taxable year will determine the sum which may be deducted from the gross income for that year.

Both owner and lessee must keep an accurate ledger account which must be charged with the amount of invested capital as ascertained heretofore, to which account or to a depletion reserve account shall be credited the amount of depletion deduction claimed and allowed each year until such time as the sum of the credits shall equal the invested capital charged, after which time no claim for depletion deduction will be allowed.

TIMBER OWNERS

Owners who are both loggers and manufacturers must set up on their records the fair market value en bloc of the timber held by them at March 1, 1913, if acquired before that date. This value must be approved by the commissioner of internal revenue.

The value so ascertained is divided by the number of feet (board measure), thereby establishing the unit of value of each board foot.

The same rule applies to timber or lands purchased after March 1, 1913, with the exception that in making the computation actual cost shall be substituted for the fair market value.

This unit price, once established, cannot be increased except as new purchases are made at an average higher cost.

The cost of the lumber sold during the taxable year is ascertained by multiplying the number of board feet sold by the unit price, and this amount is permitted to be excluded from gross receipts or through a charge to manufacturing, until the time when the total of such yearly amounts equals the total of the fair market value or cost, as the property was acquired before or after March 1, 1913.

Depreciation and Depletion in Relation to Income Tax Returns

If this fair market price includes the land as well as the timber thereon, at the end of logging operation the stump lands remain as an asset. When this asset or other salvage is disposed of the amount realized is to be treated as income for the year in which the property was sold.

Should the timber lands be sold en bloc, the gain or loss will be established on the basis of the difference between the fair market value or cost and the selling price, as the property was acquired before or after March 1, 1913.

Acceptances in Retail Business*

By W. G. AVERY

It is hardly necessary on this occasion to approach the subject of acceptances from an academic point of view, in consideration of the assumption that you are all familiar with that phase of the question.

The main object of this address is to show that the acceptance is a feasible instrument of credit in practically all lines of commercial business.

The opinion was expressed to me a short time ago that we in this country are starting at the wrong end in advocating its use. The retailer is the one who finances the largest number of commercial transactions and comes in contact with the buying public. If we can persuade the latter to recognize the acceptance as a medium of exchange, we shall have accomplished a great deal toward the end desired.

RETAIL TRADE ACCEPTANCES

In European countries, especially in France, the public has been educated in this idea for very many years. There the customer who buys on credit signs a slip for his purchases, which is virtually a trade acceptance. If such a custom can in time be inaugurated here, we shall have the foundation from which to work up to the manufacturer, instead of commencing with him as we now are trying to do. The simple signature of the customer to the charge slip made out by the salesman is virtually an acceptance without a due date, but we might, it seems to me, make a beginning in that way.

The thin end of the wedge thus having been inserted, in spite doubtless of strong protests amounting to almost a revolution on the part of the stronger and fairer element of the community, I do not think that the retailer himself, and then the wholesaler and manufacturer, would have any legitimate excuse to stay out.

THE FARMER'S PURCHASES

Suppose we take the case of the farmer who has been in the habit of buying his machinery on the instalment plan, with its

* An address before the New York State Society of Certified Public Accountants, December 9, 1918.

Acceptances in Retail Business

increased cost to him, representing the usual addition to the price of the article for the accommodation, interest, collection charges, etc.

I think a plan could be evolved whereby he could give his trade acceptance for the full purchase price, which could be secured by a lien on the purchase and would be paper eligible for rediscount by the holder. The expense of the discount borne by the acceptor would be very much less than that of the higher price he had to pay for buying on the instalment plan. The retailer holding the acceptance would have a negotiable instrument, the proceeds of which he could use to take up the acceptance he had given to the wholesaler or manufacturer. This may sound somewhat idealistic, but a plan has nevertheless been worked out very carefully somewhat along these lines, taking into consideration all contingencies. The details would be too numerous to consider within the short time allotted here, nor am I at liberty to discuss it, as the matter was outlined to me confidentially.

SOME OBJECTIONS

Many retailers make the objection that the trade acceptance is merely a means by which the wholesaler or manufacturer finances himself at the expense of the retailer's credit. A good definition of the trade acceptance is that it is "the buyer's written acknowledgment of a current business debt, payment of which is not yet due." This definition effectually silences this objection, in that it points out that the retailer who intends to pay his bills need have no adverse sentiments about signing an acceptance, because it is merely an acknowledgment of his obligation.

Another objection often raised to the signing of an acceptance is the fact that the acceptor thereby has his name on paper which gets on the open market. This in itself should certainly be no objection, for the reason that it places the acceptor on record as agreeing to pay his obligations on a definite future date. You will realize very easily that a financial statement showing acceptances payable is regarded much more highly than one showing accounts payable. I do not know whether it is within your province to advise your clients in addition to auditing their accounts, but I imagine it does not come amiss in many cases. This being so, you have exceptional opportunities for encouraging the use of acceptances, and I therefore want to lay before you a few arguments in support of the instrument.

FLUIDITY OF CREDIT

We have to consider the subject principally from the points of view of the buyer and the seller, for the purpose of this address. These arguments are possibly somewhat time-worn, but there may be some among them that have not occurred to you. One of the main virtues of the acceptance system is that it makes for greater fluidity of credit. A merchant's entire holding of acceptances can be sold, thereby converting all his sales into liquid and available capital.

Loans based on accounts receivable are usually at the ratio of two to one, but acceptances are bought to the extent of 100 per cent., based, of course, on the financial ratings of the names submitted. While touching upon this point, it may be well to mention that it becomes necessary sometimes for a merchant to sell his book accounts or to borrow against them specifically. Companies are in existence which make a business of this, by taking an assignment of the accounts. The rate of interest paid by the merchant for this accommodation varies sometimes from 8 to 12 per cent. Not only does he obtain merely a percentage of the amount assigned, but he guarantees the payment of the accounts. In advertising their facilities, these companies are careful not to mention their rates, as compared to those for which acceptances can be sold or discounted.

DISCOUNTS FOR CASH

Heavy discounts for cash will, I think, be gradually eliminated by the use of acceptances. These discounts, as you know, run as high as 24 per cent. per annum, and are very often taken by the buyer illegitimately. Let me give you a few statistics. Among manufacturers the terms are usually 60 days less 2 per cent. for cash in 10 days. An investigation made some time ago resulted in demonstrating the fact that when bills are discounted instead of being paid in 10 days, they have averaged 15 days; and for those on which the option of 60 days has been taken, the average payment is 75 to 80 days; and at least 10 per cent. require 90 days or more.

Turning to wholesale distributors—the analysis indicated that generally speaking from 40 to 50 per cent. of buyers discount their bills within 15 days after purchase, while of those who exercise the 60 day option from 25 to 30 per cent. pay “promptly” (so-called) or within one month following the 60 day maturity.

Acceptances in Retail Business

Of the remaining 20 per cent. only about one-half pay in the period between three and four months after purchase, while the other half pay in from four to six months, or never.

It can be readily seen, therefore, that it is better to sell on longer time with acceptances than on so-called short time with open accounts.

COMMERCIAL PAPER

As distinguished from commercial paper, the trade acceptance is more desirable in the eyes of a banker. In the first place it represents actually current transactions, the purchase and sale of goods. There are no means of ascertaining in many cases, the object for which the former is issued, and it may be simply accommodation or may represent considerably overdue accounts.

Another feature to be considered is the fact that by giving and taking acceptances a merchant is in the position of estimating definitely his financial position on a given date, thus being able to regulate his commitments accordingly.

VALUE TO BUYER

The buyer in most cases eventually becomes the seller, and it is therefore necessary for him to consider the matter from both sides. The features I have just enumerated may be taken more from the point of view of the latter, but there are others which are more or less vital to the buyer. He is stimulated to meet his payments promptly and this tends naturally to a general improvement in the management of his affairs, which in turn enhances his credit rating and financial reputation. The use of acceptances gives him a good argument in requesting them from his customers when he becomes the seller. By giving his acceptance, as stated before, he acknowledges the obligation, but that does not mean that he waives legal claim against the seller if the goods purchased are not up to specification.

POSSIBLE EXTENT OF USE

While it is a mistaken idea that the trade acceptance system is applicable to all business transactions, it is a fact that billions of dollars worth of goods are to-day being sold on open account, which could be financed by the acceptance, and this would conduce to better business methods, in that there would be a definite obligation, payable on a definite date and constituting a readily negotiable instrument. Thousands of firms are now using accep-

tances freely, and reports are received daily by the American Trade Acceptance Council, setting forth the satisfactory experiences of many of these firms.

In Canada, as you all doubtless know, acceptances are used very freely and traded in extensively by the banks. Losses are very infrequent and experience has shown that when they have occurred, the cause has been a lack of proper care in scrutinizing the names thereon.

You are in a better position than I to be familiar with the financial intricacies of different lines of business, and, therefore, better able to judge of the feasibility of acceptances in connection therewith. It seems to me, however, that there should be very few cases in which they cannot be used.

At any rate, it is most desirable that we should endeavor to overcome objections wherever possible, as there can be no doubt that the trade acceptance will release an enormous amount of capital and at the same time place our financial structure on a sound credit foundation.

Municipal Accounts*

BY OSWALD LYON.

In the last decade there has been a well sustained agitation throughout the United States for a uniform system of municipal accounts and this subject has received considerable attention at the hands of the National Municipal League, the New York Bureau of Municipal Research and the United States census bureau. Without doubt, one of the obstacles to be overcome in this accomplishment is the great difference which exists between the laws governing the finances of municipalities in the many states.

A municipal corporation is a public corporation formed by a community for its own governmental purposes as in the case of a city, town or village. Chief Justice Marshall defined a public corporation as "such only as is founded by the government for public purposes where the whole interests belong to the government." It should be remarked, however, that frequently some of the functions of a municipality are performed by private corporations, as, for example, hospitals and schools.

Whilst a system of accounts for a public corporation or municipality does not materially differ from that of a private corporation, identical methods of handling finances and recording transactions cannot be prescribed, in spite of the fact that the governing principles are the same. It may be said, however, that not the least of the objects in both cases are to narrate all transactions, reflect all conditions and fix the blame for dishonesty, extravagance and incompetence.

Since a municipality does not endeavor to make a profit from its operations, but seeks only to perform a service at cost, it does not seem desirable that it should prepare and submit a profit and loss account for the information of the public. It is, however, essential that intelligible accounts be rendered annually, with logical classifications of all revenues and expenditures, and that they be published. Many municipalities prepare no balance-sheet and such statements as they present show lack of co-ordination.

*A thesis presented at the November, 1918, examinations of the American Institute of Accountants.

The following are some of the main features for consideration in the accounts of a municipality:

1. General account,
2. Current balance-sheet,
3. Fund balance-sheet,
4. Capital balance-sheet,
5. Consolidated balance-sheet,
6. Revenue and expenses,
7. Revenue, collection and control of,
8. Expenditures, control of and responsibility for,
9. Appropriations,
10. Sinking funds,
11. Stores and equipment, control of,
12. Payrolls.

GENERAL ACCOUNT

The general account would include:

<i>Assets</i>	<i>Liabilities</i>
Cash	Audited bills and payrolls
Amounts due city:	Warrants payable
Taxes and water rents	Loans in anticipation of taxes
Delinquent taxes and water rents	Reserves
Expenses prepaid	Any other liabilities
Outstanding claims	Surplus

The surplus or deficit at the beginning of the year, subject to the difference between revenue and expenditures for the current year, would be the difference between the assets and liabilities. Revenue and expenditures account would narrate the details of this.

From these two accounts the financial needs of the following year would be apparent.

In considering future needs, cash, revenues, stores, etc., and the accounts and payrolls payable must not be confused with properties, permanent funds and the bonded debt.

The purpose of the general account is perhaps better shown by the preparation of a current balance-sheet and fund balance-sheet. The former contains only those assets and liabilities which have to do with current service needs and the latter contains the following:

Municipal Accounts

Debits:

Balance of current fund cash over immediate demands.
Outstanding accounts receivable.
Unapplied balance of estimated receipts.

Credits:

Authorizations to incur liabilities (balance unexpended).
Unencumbered balances.

To the general account there should be appended a statement of the surplus account showing as charges or credits the changes which have taken place in the assets and liabilities during the year. The balance of this statement will agree with the balance of surplus as shown in the general account.

CAPITAL BALANCE-SHEET

Whereas a city possesses property, plants and equipment of many kinds it is advisable to prepare a capital balance-sheet showing those assets and the corresponding liabilities incurred therefor. This would include:

<i>Assets</i>	<i>Liabilities</i>
Cash (for permanent properties or capital liabilities)	Audited vouchers payable
Assessments receivable	Certificates of indebtedness
Land, buildings, equipment, etc.	Bonded debt
	Surplus

Detailed records of each of the above items should be appended to the balance-sheet.

The capital balance-sheet is necessary, for it shows how money voted for purchase of property and other purposes has been expended. It also is of special interest as comparing property with bonded debt, and, moreover, reflects the gradual increase in the value of the former as the latter decreases. There can be no logical argument in favor of eliminating this exhibit.

CONSOLIDATED BALANCE-SHEET

A consolidated balance-sheet might with advantage be prepared as an additional exhibit, for it would show all the elements appertaining to the city's financial condition including estimated revenues, appropriations and reserves.

The asset of assessments receivable appearing in the capital balance-sheet consists of charges for improvements against property owners, which expenditures are generally financed by the

issue of assessment bonds. Payments made on account of such improvements would be charged to "local improvements in progress," and when completed "assessments receivable" and "permanent improvements" are charged and "capital account" is credited.

Money received from assessments against property owners must, of course, be set aside to retire assessment bonds if these have been issued for the improvements.

Land, buildings and other permanent properties should preferably stand in the balance-sheet at cost, with a reserve for depreciation set up. A detailed schedule should be appended. The property ledger would provide a perpetual inventory of real estate, buildings, etc., and the accounts therein should be credited with the depreciation of these assets.

REVENUE AND EXPENSES

At the end of each year a statement of revenue and expenses would include all revenues whether received or not and all expenses whether paid or not:

<i>Revenue</i>	<i>Expenses</i>
Taxes (total levy for year, less abatements)	Administrative expenses
Interest on taxes of year	Operating expenses
Interest on deposits	Bond interest
Department revenue	
Miscellaneous revenue	

Taxes received for prior years, receipts from assessments, sales of bonds and tax certificates are excluded from revenue, and outlays for improvements are eliminated from expenditures; for these items clearly do not form part of the cost of running the city. Nevertheless, a full and efficient account should be prepared showing all cash transactions passing through the books of the city, as each of these statements performs a decidedly different function.

REVENUE, COLLECTION AND CONTROL OF

The revenue of a municipality is chiefly derived from taxes on property, but there is also a certain amount of revenue from miscellaneous sources. In the city of New York tax bills are typed in triplicate from the original tax rolls which are kept by the collector of taxes. The first copy is the advice to the tax-

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payer, the second copy is receipted on payment and the third copy is delivered to the financial officer when the tax is paid. In addition, the chief financial officer retains a copy of the tax roll and holds the tax bills until they are put in the hands of the collector of taxes for collection. The collector of taxes makes a daily report of all collections to the financial officer, at the same time turning over to him copies of the paid tax bills, as above mentioned. The financial officer thereupon checks these tax bills, as paid, on the copy of tax roll. A periodical examination is made of unpaid bills in possession of the collector to see that the unpaid bills on hand correspond with items showing as unpaid on the tax roll. Records are kept in the office of the chief financial officer in which are entered daily the items reported as received by the collector of taxes. The controlling account for taxes is charged from the original tax roll and is credited from the cashbook records of tax collections. Other revenues are controlled in very much the same way and engraved receipt forms, numbered by machines, are used in all departments, thus minimizing the possibility of dishonesty.

EXPENDITURES, CONTROL OF AND RESPONSIBILITY FOR

Every expenditure should be preceded by a formal requisition for the goods to be supplied or service to be performed, which requisition would represent preliminary evidence of such expenditure and would bear the certificate of the individual initiating it. This would be followed by an authorization for the expenditure, provided the amount were covered by appropriation. A contract or order for the supplies or service would then be drawn in quadruplicate (one copy for file, two for the vendor and one for storekeeper or person directly concerned with service required). The vendor should render at least three invoices, one of which would be sent to the chief financial officer.

When goods have been inspected and accepted and the invoice checked as to accuracy, a voucher would be prepared at once, duly certified by each responsible individual as to requisition, authorization, terms of contract, sufficiency of appropriation, correctness of calculation, and "not already put in line for payment." It will readily be seen that in this way a complete and indisputable record of the transaction is obtained before the chief financial officer certifies the voucher for payment.

This system appears to be entirely adequate. As soon as an order is issued or contract made the liability is charged to its proper amount in the appropriation or fund ledger, and later, when a voucher has been certified for the expenditure, it will likewise be entered in this ledger, but in a separate column, a third column being reserved for adjustments. From this account the contingent liability on any appropriation is at once ascertainable. The original appropriation, less vouchers charged, gives the unexpended balance, and this balance less the contingent liability leaves the unencumbered balance.

The appropriation and contract ledger balances are controlled by the general ledger accounts: appropriations, reserve for open market orders and reserve for contracts.

It is desirable that a contract record of accounts with each contract be also kept.

APPROPRIATIONS

One of the distinctive features of a municipal corporation as compared with a private corporation is the keeping of appropriation accounts. These are not commonly met with in private corporations, railroads being one of the principal exceptions. Municipalities are compelled by law to spend money only through authorized appropriations for the purposes named and not in excess of those appropriations. The comptroller and heads of departments are legally responsible for excesses.

Appropriation accounts emanate from the budget of appropriations, at the time of passing which these accounts are opened with a view to setting forth the liabilities and expenditures on account of them. The total amount of the budget is charged to budget allowance and credited to appropriations. An account with each appropriation is kept in the fund ledger, the total of whose balances is agreed with the general ledger.

A register of appropriation transfers should be installed.

SINKING FUNDS

Sinking funds consist of investments, cash and accounts receivable which are set aside for redemption or amortization of indebtedness or obligations. Under the terms of a contract with bondholders it is incumbent upon a municipality to set aside or invest by annual instalments such sums as will accumulate, at maturity of bonds, in sufficient total to pay off or discharge the

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principal of those bonds. In order that this fund may be held intangible it is usually provided that it be transferred to trustees or commissioners appointed for the purpose of controlling and investing the fund so that the bond principal will be accumulated and paid at maturity. Accounts of sinking funds should be kept both by the commissioners and the city.

A sinking fund balance-sheet would include:

<i>Assets and instalments</i>		<i>Liabilities and reserves</i>	
<i>appropriated</i>			
Cash		Vouchers	
Investments		Warrants	
Premiums on investments		Reserve to meet funded debt	
purchased		Reserve to meet interest	
Amounts due sinking fund		Free surplus	
Other assets			
Annual instalments appropri-			
ated from revenue but not			
paid			

Considering the items composing the above balance-sheet, we find that cash is the currency available for investment or to pay off liabilities. Investments are bonds, stocks, mortgages, etc., purchased or acquired, which should be itemized in the balance-sheet, thereby conveying all information desirable in order to judge their values. Premiums on investments purchased are self-explanatory. Amounts due sinking fund are the accounts receivable, pledged or accrued to the sinking fund. Annual instalments appropriated from revenue but not paid represent the cash authorized by the budget to be paid into the sinking fund when collected or borrowed. Liabilities and reserves are made up of unaudited vouchers, registered warrants unpaid and the excess of sinking fund assets and instalments unpaid over sinking fund liabilities.

The journal entries necessary in formulating sinking fund accounts are:

1. Sinking fund cash requirements.

To reserve required to retire bonded debt at maturity.

Entry made when sinking fund requirements are determined.

2. Sinking fund cash.

To sinking fund cash requirements.

Entry made when budget funds are received.

3. Sinking fund investments (par value).

To sinking fund cash.

STORES AND EQUIPMENT, CONTROL OF

In a private corporation it is very necessary that a close check be kept on all stores and equipment, and there is an even greater need of an adequate system to take care of this asset in a municipality where waste and extravagance so often run rife. Purchases of stores, equipment, tools, etc., should be posted from the invoice register to stores and equipment accounts in the general ledger and stores and equipment ledgers should be opened with an account for each class showing the usual particulars. Requisitions would be the authority for crediting the account affected in the ledgers. A perpetual inventory can be as well maintained by a city as by a small corporation and frequent tests should be made of the various items, selected at random by a disinterested checker. In all other respects the accounting provisions would be those which are usually adopted in an up-to-date business.

PAYROLLS

Probably one of the most neglected phases of municipal accounting in the past was the matter of payrolls and the lack of an efficient and indefeasible system of handling them. In New York the budget now specifies how appropriations for payrolls shall be spent and how payments for services shall be accounted for. All employees should be obliged to turn in daily or weekly a certified record of the service performed and the number of hours worked. In the case of gangs or other groups under foremen and overseers, the latter should also certify to a record prepared by them of the time claimed and duties set forth by those employees under their supervision. The advantage of this procedure is that the signer of a false certificate renders himself liable to prosecution. The record would perhaps vary somewhat, requiring to be adapted to the special needs of different departments.

A monthly departmental payroll should show the total amount expended in that month, the proportional appropriation allowance for that month, the total disbursed to date and the balance unexpended for each division or schedule as fixed by the budget. In

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addition to the certification of the foremen and overseers, as above mentioned, payrolls should be scrutinized and certified by the accountant of the department to which they apply and further certified by the head of that department in accordance with his legal duty. Finally, the payroll, after being thoroughly checked and compared with the budget by the comptroller would be passed for payment.

It is more desirable to pay all employees by cheque than by cash, for in this way the signing of the payroll by each payee may be eliminated.

GENERAL REMARKS

The subject of municipal accounts will admit of extensive consideration and discussion. In conclusion the writer would suggest that for the benefit of the officers complete and accurate statistical reports of a municipality should be prepared periodically in comparative form and accompanied by charts. The advantages to be derived from such a plan are so numerous and convincing as to require no comments here.

It may be remarked that radical reforms have been accomplished in the accounting procedure of municipalities during the last ten years as a result of the well directed efforts of various bureaus.

The Journal of Accountancy

Published monthly for the American Institute of Accountants by
THE RONALD PRESS COMPANY, 20 Vesey Street, New York, N. Y.
Thomas Conyngton, President; L. G. Henderson, Secretary;
Hugh R. Conyngton, Treasurer.

A. P. RICHARDSON,

Editor

EDITORIAL

Income Tax Experts

Every wide-awake accountant knows that in the future practice of his profession one of the principal factors will be the preparation of income tax returns for corporations, partnerships and individual tax-payers. Whether the public approves or not an income tax is here to stay for a generation or two and probably for many generations. Therefore accountants, as the only logical interpreters of statistics, can safely look forward to a constantly increasing volume of income tax practice as the public comes to a comprehension of the truth that no one not an accountant can be trusted to prepare the reports upon which the tax must be assessed.

In the term income tax we include of course excess profits tax, war profits tax and all other tax levies based upon the excess of income over expenditure of the corporate or individual taxpayer.

Admitting then the practical certainty that the accountant must be the income tax advisor of the public we must also recognize that income tax practice will be one of the chief sources of revenue to the profession. Consequently it does not require the son of a prophet to see that it behooves the accountant to do nothing to jeopardize the development of a most important feature of present and future accountancy. Yet we frequently hear of persons describing themselves as accountants doing the things which above all others will drive the taxpayer to seek advice and assistance elsewhere.

The mails have been much burdened of late by circular letters emanating from accountants and pseudo-accountants of a general style and tenor somewhat as follows:

Editorial

Bill Sikes & Co., certified public accountants, having made a special study of all the problems arising in the making of income tax returns, and having on their staff a large number of experts in all tax matters, are prepared to assist you to make up your tax returns. They can show how to avoid the payment of any more than the law requires. You may save thousands of dollars by employing them. Mr. Autolycus will be in your city on Thursday, January 30th, and will be glad to call upon you to explain the proposition. An interview implies no obligation.

Unfortunately the type of letter quoted is not rare—nor is it always the production of some obscure practitioner or fly-by-night impostor. We have seen such letters from firms that should know better—much better.

And, more unfortunately, there are many circular letters beside which our specimen would shine as a very gem of ethical conservatism.

Is the accountant a fool or does he think he can fool the public all the time? Such letters as we have quoted have at least two effects.

In the first place they do not state facts and no sane man of business could be expected to mistake the assertions for facts. Nobody knows all about income tax and in all probability nobody ever will. The experienced and reputable accountant knows more about tax returns than anybody else knows, but there are some things even he can learn. The man who says that he knows all things displays utter contempt for the perspicacity of his hearers.

In the second place such circular letters appeal principally to the man who wishes to squirm out of paying his just obligation to the government.

During the war there was a depth of patriotism and enthusiasm spread over the country which overwhelmed even the usually dishonest, and there was not a serious amount of tax evasion. But with the approach of peace and the cessation of actual fighting many men who had not the vileness to defraud the government at war will revive enough of their innate dishonesty to evade the taxes of a government at peace.

Circular letters such as we have quoted do not specifically say that the writers will assist the taxpayer to avoid payment of what he owes—but they certainly imply it. And their appeal will be only to that class to which tax evasion appears profitable and proper.

Not long ago a young lawyer came into the office of this magazine and after presenting his card and explaining his peculiar

qualifications as a raveler of legal knots said: "I can show you how to avoid paying income tax—and you won't run any risk." At that point the interview terminated in an unusually abrupt manner.

The point of this story is that any crook would dare to make so bald and bold an offer to persons whom he had never seen and whose circumstances at least would suggest a fair degree of common decency. There must be many men to whom tax evasion is agreeable, or the expounder of false returns would find his occupation gone.

We do not argue from this that all the accountants who advertise that they can prevent excess payments would consent to make up returns of a wilfully misleading nature—but the recipient of such a circular might well be pardoned if he inferred as much.

A duty rests upon the American Institute of Accountants and all local organizations of accountants, and upon their individual members as well, to see that reprehensible advertisement in regard to income tax practice—and of course all other undesirable publicity in every field of professional labor—be absolutely prohibited. There will always be unworthy men who will pander to the desires of dishonesty, but ultimately the public will differentiate between the good accountant and the bad as it has been necessary to make a sharp distinction between members of the bar. The reputable majority of accountants must exercise special care to avoid anything which is susceptible to misinterpretation. Doubtful solicitation of work by accountants obscures the dividing line between the good and the bad—and the public cannot be expected to penetrate such obscurity.

For Those Who Fought

The American people are much concerned today with the problem of employment for the discharged soldiers and for the great numbers of men and women thrown out of work by the closing of most of the manufacturing plants which were engaged on war contracts. Every trade and every profession—in these days trade always precedes profession in order of consideration—is expected to receive back the men who left at the call or the demand of their country. Some trades are doing so. Most professions are doing so.

Editorial

Some professions, however, can do more and better than that, and it seems to us accountancy is particularly well situated to take into its ranks many of the returning soldiers and sailors who were not accountants in the past. Especially in the case of men so wounded as to preclude their participation in active physical effort it seems that accountancy may hold out an alluring opportunity. Of course it would be utterly foolish to think that every returning soldier or sailor would ever be able to do valuable accounting work. But if one man in every hundred has the education and ability which in the coming years may be expanded and augmented to a point of accounting efficiency it is surely worth while. There has always been a dearth of well qualified men in the profession. May not the coming scarcity of employment for any except the physically active and the existing scarcity of accountants be made to offset each other to some extent? Accountancy offers good compensation and the work is attractive to those who have the necessary analytical mind. This thought is presented for the consideration of the profession and others interested.

Income Tax Department

EDITED BY JOHN B. NIVEN, C.P.A.

The 1918 revenue act being still in the hands of the legislators, it would be premature to discuss its proposed features in these pages while they remain matters of uncertainty. On account of the delay in passing the bill, an extension of the present statutory date for filing will be inevitable.

The only new material issued for general information on the subject of income taxes consists of the following treasury decisions:

T. D. 2778 outlines the procedure in using certificates of indebtedness to pay these taxes. It is of interest to the taxpayer to note that the par of the certificates deposited must not exceed the amount of the taxes being paid; that matured interest coupons must be detached and collected by the taxpayer, but unmatured coupons must be left attached, any interest on which accruing to the taxpayer will be remitted by the federal reserve bank with which the collector deposits the certificates; and that certificates belonging to the taxpayer on hand in any federal reserve city may, with the consent of the collector, be deposited with the federal reserve bank at that point, and credit will be given therefor by the collector on the strength of the certificate of deposit of the bank.

T. D. 2783 relates to the taxability of dividends received by holding companies from their subsidiaries, which to the extent that they accrued prior to January 1, 1913, are now declared by the supreme court to be not subject to taxation.

TREASURY RULINGS

(T. D. 2778, Dec. 11, 1918)

Instructions relative to acceptance of certificates of indebtedness for income and profits taxes

To collectors of internal revenue and others concerned:

Collectors of internal revenue are directed to receive at par United States treasury certificates of indebtedness of the tax series of 1919, dated August 20, 1918, and maturing July 15, 1919, and of series T, dated November 7, 1918, and maturing March 15, 1919, in payment of income and profits taxes when payable at or before the maturity of the certificates. The amount, at par, of the treasury certificates of indebtedness presented by any taxpayer in payment of income and profits taxes must not exceed the amount of the taxes to be paid by him. Deposits of certificates of indebtedness must be made by collectors with the federal reserve banks of the districts in which the respective collectors' offices are located. Such certificates of indebtedness may be accepted by the collector prior to the date the tax is due and in that case should be forwarded by the collector to the federal reserve bank to be held for account of the collector until the date the tax is due and for deposit on such

Income Tax Department

date. Certificates of indebtedness should be stamped as follows by the collector and when so stamped transmitted to the federal reserve bank by registered mail uninsured:

....., 191....

This certificate has been accepted in payment of income and profits taxes and will not be redeemed by the United States except for credit of the undersigned.

.....,

Collector of internal revenue for the.....district of.....

Each unmaturing coupon attached to each such certificate of indebtedness must be stamped across the face by the collector as follows: "Paid."

All coupons maturing on or before the date the tax is due must be detached by the taxpayer and collected in ordinary course, but all other coupons must be attached to the certificates and forwarded to the federal reserve bank. Any accrued interest to the date the tax is due not covered by coupons detached as above provided will be remitted to the taxpayer by the federal reserve bank by cheque and the collector must furnish to the federal reserve bank the name and address of the taxpayer, the amount and serial numbers of the certificates presented in each case, the date of issue of the certificates, and the date the tax was due. Collectors shall in no case pay interest on such certificates nor accept them for an amount other or greater than their face value. Receipts given by collectors to taxpayers should show the amount of certificates of each series received in payment of taxes.

The collectors should make in tabular form a schedule in duplicate of the certificates of indebtedness to be sent to the federal reserve bank, showing the serial number of each certificate, date of issue, and face value. Certificates of indebtedness accepted prior to the date the tax is due must be scheduled separately, and such date must appear on the schedule. At the bottom of the schedule there should be written or stamped "Income and profits taxes, \$.....," which must agree with the total shown on the schedule. Such income and profits tax deposits must in all cases be shown on the face of the certificate of deposit (national bank form 15) separate and distinct from the item of miscellaneous internal revenue collections (formerly called "ordinary"), but it is not necessary to give the separation into corporation income, individual income and profits taxes. One copy of this schedule must accompany the certificates sent to the federal reserve bank and the other be retained by the collector.

Until certificates of deposit are received from the federal reserve banks the amounts must be carried as cash on hand, and not credited as collections, as the dates of certificates of deposit determine the dates of collections.

For the purpose of saving taxpayers the expense of transmitting such certificates as are held in federal reserve cities to the office of the collector in whose district the taxes are payable, taxpayers desiring to pay income and profits taxes by treasury certificates of indebtedness acceptable in payment of such taxes should communicate with the collector of the district in which the taxes are payable and request from him authority to deposit such certificates with the federal reserve bank in the city in which the certificates are held.

Collectors are authorized to permit deposits of treasury certificates of indebtedness in any federal reserve bank with the distinct understanding that the federal reserve bank is to issue a certificate of deposit in the collector's name covering the amount of the certificates of indebtedness at par and to state on the face of the certificate of deposit that the amount represented thereby is in payment of income and profits taxes.

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The federal reserve bank should forward the original certificate of deposit to the treasurer of the United States, with its daily transcript, and transmit to the collector the duplicate and triplicate, accompanied by a statement giving the name of the taxpayer for whom the payment is made in order that the collector may make the necessary record and forward the duplicate to this office.

(T. D. 2783, Jan. 7, 1919)

Income tax act of October 3, 1913—Decision of the supreme court

The appended decision (captions only) of the United States supreme court in the case of the *Gulf Oil Corporation, petitioner, v. C. G. Lewellyn, collector of internal revenue for the 23rd district of Pennsylvania*, is published for the information of internal revenue officers and others concerned.

1. TAXABILITY OF DIVIDENDS FROM SUBSIDIARY CORPORATIONS.

Where a holding company owns all the stock of its subsidiary corporations except the qualifying shares of the directors, and the subsidiary corporations together with the holding company constitute a single enterprise, the accumulated earnings and surplus of the subsidiary corporations used by them as capital prior to January 1, 1913, do not become taxable income of the holding company when formally transferred to it as dividends.

2. EFFECT OF THE DECISION.

Though the holding company did not itself do the business of its subsidiaries and have possession of their property as in the *Southern Pacific Company v. Lowe* (247 U. S. 330) (T. D. 2730), the principle of that case governs.

3. JUDGMENT REVERSED.

The judgment of the circuit court of appeals (245 Fed. 1) (T. D. 2542) is reversed.

E. J. Bishop announces that he has formed a partnership with Herman G. Brissman under the firm name of Bishop, Brissman & Co. with offices in the Globe building, St. Paul, and Wilmac building, Minneapolis.

G. Charter Harrison announces that he has admitted Eric A. Camman into partnership under the firm name of G. Charter Harrison & Co., with offices at 31 Nassau street, New York.

Sparrow, Harvey & Co. announce that Lewis C. Fuller has been admitted a member of the firm as of January 1, 1919. There is no change in the firm name.

W. G. Adkins announces association with Herbert W. Adkins under the firm name of William G. & Herbert W. Adkins with offices in Chicago and Milwaukee.

Edward P. Moxey & Co. announce the admission of Arthur T. Cameron, as member of the firm.

Students' Department

EDITED BY SEYMOUR WALTON, C.P.A.
(ASSISTED BY H. A. FINNEY, C.P.A.)

INSTITUTE EXAMINATION

NOVEMBER, 1918

In regard to the following attempt to present the correct solutions to the questions asked in the examination held by the American Institute of Accountants in November, 1918, the reader is cautioned against accepting the solutions as official. They have not been seen by any of the examiners—still less endorsed by them.

ACCOUNTING THEORY AND PRACTICE

PART I

Problem I:

The following items appear on the balance-sheet of the American Pin Company, June 30, 1912: land, buildings, equipment, etc., \$335,000; capital stock of the Bronx Pin Ticket Company, par \$50,000; cost, \$57,400; patents, \$15,000; working and trading assets, \$37,500; cash, \$10,000; accounts receivable, \$32,000; due from Bronx Pin Ticket Company, \$375.82; deferred assets, \$1,500; first mortgage 6% gold bonds payable, due 1922, \$100,000; taxes accrued, \$3,250; salaries and wages accrued, \$4,327.82; accounts payable, \$123,749.83; notes payable and interest, \$80,125; interest accrued on first mortgage bonds payable, \$2,500; reserve for depreciation of building and equipment, \$35,000; preferred capital stock outstanding, \$75,000; common capital stock outstanding, \$50,000; profit and loss surplus, \$14,823.17.

The American Pin Company having acquired all the capital stock of the Bronx Pin Ticket Company, the balance-sheet of which appears below, it is proposed to merge the two companies as of July 1, 1912.

THE BRONX PIN TICKET COMPANY

Assets—land, buildings and equipment, etc., \$260,000; capital stock of the Blauser Pin Tray Company carried at par, \$35,000; patents, \$22,625; working and trading assets, \$10,000; cash, \$10,365.27; accounts receivable, \$37,943.86; sinking fund, \$3,236.92; deferred charges to expense, \$1,200. Liabilities and capital—first mortgage 5% gold bonds payable, due 1925, \$50,000; taxes accrued, \$2,750; salaries and wages accrued, \$3,147.83; due to creditors \$144,720.30; due to American Pin Company, \$375.82; notes payable and interest, \$31,372.53; interest accrued on first mortgage bonds payable, \$1,250; reserve for depreciation of plant and equipment, \$27,500; common capital stock outstanding, \$50,000; profit and loss surplus, \$69,254.57.

Prepare:

- (a) The entries on the books of the American Pin Company.
- (b) The entries on the books of the Bronx Pin Ticket Company.
- (c) Balance-sheet of the American Pin Company after the merger.

Solution:

The first thing to be noted is that the net assets of the Bronx Pin Ticket Company, as represented by its capital of \$50,000 and surplus of \$69,254.57, are \$119,254.57, while on the books of the American Pin Com-

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pany this entire value is carried at only \$57,400. Therefore the American Pin Company owns an asset that is reputed to be worth \$61,854.57 more than the amount at which it appears on the books of the American Pin Company. Since there is no intimation that the assets of the Bronx Pin Ticket Company are to be scaled down in any degree, their reputed value must be taken as actual. The result is that the American Pin Company increases its own net worth in the merger to the extent of \$61,854.57, which must be expressed by an addition to its surplus. Whether this increase is due to profits accumulated for several years by the Bronx Company, or is partly due to its stock having been purchased below book value is not material. If the value is sufficiently good to appear in the surplus of one company it is equally proper in the surplus of the merger.

There are three ways by which this increase may be put on the books of the American Pin Company.

1. The Bronx Pin Ticket Company may declare a dividend of \$61,854.57 out of its surplus, charging surplus and crediting the open account of the American Pin Company. The latter would then charge the open account of the Bronx Pin Ticket Company and credit surplus. This would reduce the capital and surplus of the Bronx Pin Ticket Company to \$57,400, which would offset the investment account on the American Pin Company books, the two inter-company accounts being also offset.

2. The American Pin Company may recognize the true condition of affairs by making an entry charging the investment account of Bronx Pin Ticket Company \$61,854.57, and crediting surplus, thus bringing the investment account to equal the capital and surplus of the Bronx Pin Ticket Company to be offset in the merger.

3. The American Pin Company may take over the assets and liabilities of the Bronx Pin Ticket Company. The assets being \$119,254.57 greater than the liabilities, the offsetting credits would be to the investment account of Bronx Pin Ticket Company stock \$57,400.00 and to surplus \$61,854.57. This recognizes the increase only as a result of the merger.

Adopting the last method, the journal entries to be made by the American Pin Company would be:

Land, buildings and equipment	260,000.00	
Patents	22,625.00	
Working and trading assets	10,000.00	
Cash	10,365.27	
Accounts receivable	37,943.86	
Deferred charge to expense	1,200.00	
Blauser Pin Tray Co. stock	35,000.00	
Sinking fund	3,236.92	
To Bronx Pin Ticket Co., open account		380,371.05
To take over assets of Bronx Pin Ticket Co. as per minutes, etc.		

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Bronx Pin Ticket Co., open account	260,740.66	
To 1st mortgage 5% gold bonds		50,000.00
Taxes accrued		2,750.00
Salaries and wages accrued		3,147.83
Accounts payable and interest		144,720.30
Notes payable and interest		31,372.53
Bond interest accrued		1,250.00
Reserve for depreciation		27,500.00
To assume liabilities and reserves of Bronx Pin Ticket Co. as per minutes, etc.		

The Bronx Pin Ticket Co. open account will now have a balance of \$119,254.57 credit (\$380,371.05 cr. less debits of the original balance \$375.82 and above entry of \$260,740.66). The final entry would be:

Bronx Pin Ticket Co., open account	119,254.57	
To Bronx Pin Ticket Co. stock		57,400.00
Surplus		61,854.57
To close investment account and to record increase in value of the stock.		

On the books of the Bronx Pin Ticket Company the journal entries would be:

American Pin Co. open account	380,371.05	
To land, buildings and equipment		260,000.00
Patents		22,625.00
Working and trading assets		10,000.00
Cash		10,365.27
Accounts receivable		37,943.86
Deferred charges to expense		1,200.00
Blausen Pin Tray Co. stock		35,000.00
Sinking fund		3,236.92
Transferring assets as per minutes, etc.		

Bonds	50,000.00	
Taxes accrued	2,750.00	
Salaries and wages accrued	3,147.83	
Accounts payable	144,720.30	
Notes payable and interest	31,372.53	
Bond interest accrued	1,250.00	
Reserve for depreciation	27,500.00	
To American Pin Co. open account		260,740.66
To record assumption of liabilities and reserve by American Pin Co., etc.		

(NOTE. In an examination I would not detail the assets and liabilities in these two entries, unless I had plenty of time, which is extremely doubtful. I would say "To assets detailed as in previous entry \$380,371.05" and "Liabilities detailed as in previous entry \$260,740.66.")

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The final entry would be:

Capital stock	50,000.00	
Surplus	69,254.57	
To American Pin Co. open account		119,254.57
To close accounts.		

BALANCE-SHEET, AMERICAN PIN COMPANY

JULY 1, 1912

<i>Assets</i>		<i>Liabilities</i>	
Land, buildings & equipment 595,000.00		Capital stock preferred	75,000.00
Less reserve 62,500.00	532,500.00	Capital stock common	50,000.00
		Surplus	76,677.74
Patents	37,625.00	6% bonds 1922	100,000.00
Sinking fund	3,236.92	5% bonds 1925	50,000.00
Blauser Pin Tray Co. stock	35,000.00	Notes payable & interest	111,497.53
Accounts receivable	69,943.86	Accounts payable	268,470.13
Working & trading assets	47,500.00	Bond interest accrued	3,750.00
Deferred charges	2,700.00	Taxes accrued	6,000.00
Cash	20,365.27	Salaries & wages accrued	7,475.65
	<u>748,871.05</u>		<u>748,871.05</u>

NOTE: Not part of the answer. The treatment that has been given this problem would be possible only where all the stock was owned by the same persons and in the same proportions. If the stock of the Bronx Pin Ticket Company were held by any one but the American Pin Company, there would have been conflicting interests that would have to be reconciled. Not knowing the status of the preferred stock, we could not venture an opinion as to the basis of reconciliation, but can merely point out that there is a great difference between the two companies as to capitalization and surplus. The difference in surplus may be explained by large dividends having been paid by one company and not by the other, or it may indicate an earning power on the part of the Bronx Pin Ticket Company that would entitle it to stock for goodwill. As it is we need pay no attention to it.

Problem 2:

The following problem is based upon the estimate cost system. No factory ledger will be used, all accounts being kept on the general ledger. The business is the making of men's clothes, and two principal materials will be used, fine woollens and plain woollens, of which stock records will be kept. Stock records will also be kept for finished goods.

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(a) The following styles of clothing will be made, and they are estimated to cost:

	Style 801	Style 802	Style 803
Materials used	\$12.50	\$8.00	\$4.00
Supplies, (linings, buttons, etc.)	3.00	2.50	2.00
Labor	9.00	6.00	4.50
Factory expenses, 60%	5.40	3.60	2.70
	<u>\$29.90</u>	<u>\$20.10</u>	<u>\$13.20</u>

Note that the estimated costs are subdivided into four sections and that the accounts must be kept to record the corresponding subdivisions of operating costs.

(b) The company starts with the following:

	Dr.	Cr.
Machinery and equipment	\$10,000.00	
Cash	40,000.00	
Capital stock		\$50,000.00
	<u> </u>	<u> </u>

(c) The purchases for the first month according to voucher record are:

Materials, fine woolens, 2,000 yds. at \$3.00	\$6,000.00
Materials, plain woolens, 3,000 yds. at \$1.50	4,500.00
Rent of factory	500.00
Lining, buttons and thread, etc.	3,400.00
Salesmen's commissions paid	700.00
Office expenses	120.00
Repairs to machines and equipment	350.00
Electric power	440.00
Oil, waste and other factory supplies	225.00
	<u>\$16,235.00</u>

(d) The payrolls are summarized as follows:

Foreman and timekeepers	250.00
Tailors, cutters, etc. (direct labor)	4,600.00
Office and salesmen's salaries	750.00
Inspectors and other indirect factory wages	435.00
	<u>\$6,035.00</u>

(e) Depreciation on equipment is calculated at 1% per month.

(f) The cutting room foreman reports having taken from stock and cut the following materials for use on garments in progress:

1,400 yds. fine woolens
2,200 yds. plain woolens

(g) The tailoring foreman reports the following garments finished and placed in stock:

Style No. 801	200 pieces
" " 802	300 "
" " 803	200 "

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(h) The sales record is as follows:

Invoice No. 1.	Style No. 801	100 pieces	\$4,000.00
" "	" " 803	100 "	2,000.00
" "	2. " " 801	50 "	2,050.00
" "	3. " " 802	100 "	3,000.00
" "	4. " " 802	100 "	2,800.00
	" " 803	25 "	450.00
			<u>\$14,300.00</u>

- (i) Hint: make entry for cost of sales.
- (j) Received cash from customers, \$9,000.00.
- (k) Paid out cash for wages, \$6,035.00, and vouchers, \$7,650.00.
- (l) Inventories at end of month. (In addition to stocks of raw materials and finished goods as shown by stock records.)
 Supplies, \$1,000.00.
 Unfinished goods:
 Style No. 801, 50 pieces.
 All material cut.
 All supplies provided.
 Labor half completed.
 Style No. 802, 100 pieces.
 All material cut.
 Half of supplies provided.
 Half of labor finished.
- (m) Prepare balance-sheet and profit and loss account for the month. Add or deduct from cost of sales, when preparing profit and loss account, the unabsorbed labor, expenses, etc.
- (n) Show how balances of raw material and finished goods are made up.

Solution:

It is necessary to set up skeleton ledger accounts using estimated figures for all the cost records, the accounts being finished by the actual figures as taken from the financial books. If the estimate were exactly accurate the various accounts that represent work in progress would balance. Any discrepancies between the estimates and the actual figures will cause a balance, debit or credit, in the accounts of labor, etc., that are the elements of the cost. The problem requires that these discrepancies be absorbed by adding them to or deducting them from the cost of sales; therefore no attempt is made to rectify the inventories of finished and unfinished goods on hand, which are taken at estimated cost.

Materials account could be credited with the estimated amounts that would represent the cost of the material that should go into the product, and the discrepancy between estimate and actual figures would then appear in the material account. As the quantities issued and the prices are both known, the account will naturally be credited with the actual figures, with the result that the discrepancy due to errors in estimating material cost will be transferred to the account of work in progress.

The inventories are given first so that totals may be used in each of the accounts.

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Materials, 600 yards fine at \$3.00	1,800	
800 yards plain at \$1.50	1,200	3,000
	<hr/>	
Supplies, as given in problem		1,000
Finished goods, No. 801, 50 pieces at \$29.90	1,495	
No. 802, 100 " " 20.10	2,010	
No. 803, 75 " " 13.20	990	4,495
	<hr/>	
Goods in progress		
No. 801, Material 50 pieces at \$12.50	625	
Supplies " " " 3.00	150	
Labor " " " 4.50($\frac{1}{2}$)	225	
Overhead 60% of labor	135	1,135
	<hr/>	
No. 802, Material 100 pieces at \$8.00	800	
Supplies " " " 1.25($\frac{1}{2}$)	125	
Labor " " " 3.00($\frac{1}{2}$)	300	
Overhead 60% of labor	180	1,405
	<hr/>	<hr/>
Total		11,035
		<hr/> <hr/>

MATERIAL

Vouchers, 2,000 yds. fine @ \$3.00	6,000	Work in progress 1,400 yds. fine	4,200
" 3,000 " plain @ 1.50	4,500	" " " 2,200 " plain	3,300
		Balance, inventory	3,000
	<hr/>		<hr/>
	10,500		10,500
	<hr/>		<hr/>
Balance	3,000		

WORK IN PROGRESS

Material 1,400 yds. fine \$3.00	4,200	Finished goods:	
2,200 " plain 1.50	3,300	No. 801—200 @ \$29.90	5,980
Supplies: finished goods	1,750	802 300 @ 20.10	6,030
Unfinished	275	803 200 @ 13.20	2,640
	<hr/>	Inventory, balance	2,540
Labor: finished goods	4,500	Adjustment account, difference	
Unfinished	525	material	375
	<hr/>		
Factory expense:			
Finished goods	2,700		
Unfinished	315		
	<hr/>		
	17,565		17,565
	<hr/>		<hr/>
Balance inventory	2,540		

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		SUPPLIES	
Vouchers	3,400	Work in progress, viz:	
		801 finished 200 @ \$3.00	600
		802 " 300 @ 2.50	750
		803 " 200 @ 2.00	400 1,750
		801 unfinished	
		50 @ 3.00	150
		802 " 1/2 100 @ 1.25	125 275
			<u>2,025</u>
		Inventory	1,000
		Adjustment account for difference	375
	<u>3,400</u>		<u>3,400</u>
Balance, inventory	1,000		
		DIRECT LABOR	
Cash, tailors, cutters, etc.	4,600	Work in progress, viz:	
Adjustment account for difference	425	No. 801 finished 200 @ \$9.00	1,800
		No. 802 finished 300 @ 6.00	1,800
		No. 803 finished 200 @ 4.50	900 4,500
		No. 801 unfinished 1/3 50 @ 4.50	225
		No. 802 unfinished 1/2 100 @ 3.00	300 525
	<u>5,025</u>		<u>5,025</u>
		FACTORY EXPENSE	
Cash, foreman, etc.	250	Work in progress	
" inspectors, etc.	435	60% of \$4,500 labor	2,700
Vouchers, rent of factory	500	60% of \$525 labor	315
" repairs to machinery, etc.	350		
" electric power	440		
" oil, waste, etc.	225		
Depreciation, equipment	100		
Adjustment account for difference	715		
	<u>3,015</u>		<u>3,015</u>

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FINISHED GOODS			
Work in progress estimate:		Cost of sales, estimate:	
No. 801	200 @ 29.90	5,980	No. 801 150 @ 29.90 4,485
802	300 @ 20.10	6,030	802 200 @ 20.10 4,020
803	200 @ 13.20	2,640	803 125 @ 13.20 1,650
			10,155
		Balance, inventory	4,495
		<u>14,650</u>	<u>14,650</u>
COST OF SALES ADJUSTMENT			
Finished goods, cost estimate	10,155	Labor adjustment	425
Material adjustment	375	Factory expense adjustment	715
Supplies adjustment	375	Sales, adjusted cost	9,765
	<u>10,905</u>		<u>10,905</u>
SALES			
Cost of sales, adjusted	9,765	Sales record	14,300
Gross profit to profit & loss	4,535		
	<u>14,300</u>		<u>14,300</u>
PROFIT AND LOSS			
Office & salesmen's salaries	750	Gross profit from sales	4,535
Salesmen's commissions	700		
Office expense	120		
Net profit to surplus	2,965		
	<u>4,535</u>		<u>4,535</u>
CASH			
Capital paid in	40,000	Vouchers paid	7,650
Accounts receivable	9,000	Payrolls	6,035
		Balance	35,315
	<u>49,000</u>		<u>49,000</u>
Balance	35,315		
VOUCHERS PAYABLE			
Cash	7,650	Voucher record	16,235
Balance	8,585		
	<u>16,235</u>		<u>16,235</u>
		Balance	8,585

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ACCOUNTS RECEIVABLE			
Sales record	14,300	Cash	9,000
		Balance	5,300
	<hr/>		<hr/>
	14,300		14,300
	<hr/>		<hr/>
Balance	5,300		

BALANCE-SHEET (Date)			
<i>Assets</i>		<i>Liabilities</i>	
Machinery & equipment	10,000	Capital stock	50,000
Less reserve	100	9,900 Surplus	2,965
	<hr/>		
Material	3,000	Vouchers payable	8,585
Supplies	1,000		
Work in progress	2,540		
Finished goods	4,495		
	<hr/>		
Accounts receivable	5,300		
Cash	35,315		
	<hr/>		<hr/>
	61,550		61,550
	<hr/>		<hr/>

Although it may not be expected, it is well to give a profit and loss statement. This may be based on estimated figures with adjustments of the goods sold, as requested in the problem, or on the actual figures from the financial records.

PROFIT AND LOSS, MONTH OF—		
Sales		14,300
Cost of sales, estimated:		
Material	7,125	
Direct labor	5,025	
Supplies	2,025	
Factory expense	3,015	
	<hr/>	
	17,190	
Less inventory goods in progress	2,540	
	<hr/>	
Estimated cost of goods made	14,650	
Less inventory finished goods	4,495	
	<hr/>	
Estimated cost of goods sold	10,155	
Adjustments		
Deduct labor over-absorbed	425	
Factory expense over-absorbed	715	
	<hr/>	
	1,140	

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Less material unabsorbed	375		
Supplies "	375	750	390
	<hr/>	<hr/>	<hr/>
Actual cost of goods sold			9,765
			<hr/>
Gross profit			4,535
Selling and general expense:			
Office and salesmen's salaries		750	
Salesmen's commissions		700	
Office expenses		120	1,570
		<hr/>	<hr/>
Net profit for month			2,965
PROFIT AND LOSS, MONTH OF _____			
BASED ON ACTUAL FIGURES			
Sales			14,300
Cost of sales			
Material	10,500		
Less inventory	3,000	7,500	
	<hr/>	<hr/>	
Labor		4,600	
Supplies	3,400		
Less inventory	1,000	2,400	
	<hr/>	<hr/>	
Factory expense			
Rent	500		
Repairs	350		
Inspectors' wages	435		
Power	440		
Oil, waste, etc.	225		
Foreman and timekeepers	250		
Depreciation	100	2,300	
	<hr/>	<hr/>	
			16,800
Less goods in progress inventory, estimate		2,540	
		<hr/>	
Cost of goods made		14,260	
Less finished goods inventory, estimate		4,495	
		<hr/>	
Cost of goods sold			9,765
			<hr/>
Gross profit			4,535
Selling and general expense			
Office and salesmen's salaries		750	
Salesmen's commissions		700	
Office expenses		120	1,570
		<hr/>	<hr/>
Net profit for month			2,965
			<hr/>

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Problem 3:

A dealer in foreign exchange finds from his books that he has had the following transactions in London exchange during a particular month, viz.:

Exchange bought in local market:

Jan. 1 30-day bill, payable in London £300 @ 4.75
Jan. 15 Bill due at sight in London £2,500 @ 4.76

Exchange sold in local market:

Jan. 5. Bill due in London at sight £1,000 @ 4.77
Jan. 20. Cable transfer £2,000 @ 4.78

Foreign correspondents' draft honored and paid:

Jan. 20 Bill at 30 days after sight accepted Dec. 21st
£500 @ 4.78

State how the balance on the account stands at the close of the month, and how much profit or loss has been derived from the transactions. (At Jan. 31st the rate for cable transfers is 4.80.) Is the profit or loss so stated final?

Solution:

Although the problem asks only for the balance at the close of the month and the profit or loss from the transactions, it is probable that the whole account is desired, as it would have to be set up any way.

There are two ways of keeping foreign exchange accounts. The first one, which is prevalent in the United States, records the transactions in both currencies at the actual figures, the foreign currency columns constituting a running inventory. As in an old fashioned merchandise account the inventory is valued at the end and the domestic currency balance is adjusted to the inventory value by a debit or credit to exchange account. The account would be as follows:

LONDON CORRESPONDENT							
Jan. 1	30-days	£300	\$1,425	Jan. 5	sight	£1,000	\$4,770
15	sight	2,500	11,900	20	cable	2,000	9,560
20	cash	500	2,390	31	Balance @		
					4.78	300	1,434
31	Cr. ex.		49				
		<u>£3,300</u>	<u>\$15,764</u>			<u>£3,300</u>	<u>\$15,764</u>
Feb. 1	Balance	300	1,434				

The other plan, said to be prevalent in Canada, reduces all the transactions to a par of \$4.8665 to the pound sterling by entries on the registers of bought and sold drafts, debiting or crediting exchange, as follows:

BOUGHT REGISTER							
Date	Name	Rate	£	s.d.	Cost	Par	Cr. Dr. exch. exch.
Jan. 1		4.75	300	0.0.	1,425	1,459.95	34.95
15		4.76	2,500	0.0.	11,900	12,166.25	266.25
21	Acceptance paid	4.78	500	0.0.	2,390	2,433.25	43.25
			<u>3,300</u>	<u>0.0.</u>	<u>15,715</u>	<u>16,059.45</u>	<u>344.45</u>

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SOLD REGISTER						
Jan. 5	4.77	1,000	0.0.	4,770	4,866.50	96.50
20	4.78	2,000	0.0.	9,560	9,733.00	173.00
31 Inventory balance	4.78	300	0.0.	1,434	1,459.95	25.95
				3,300	0.0.	15,764
						16,059.45
						295.45

The balance of the entries to exchange is \$49.00 as by the other plan. The sterling and the par columns would be posted to the ledger daily and the balance carried down January 31 would be £300.00, \$1,459.95.

The balance at the end is valued at 4.78, the cost of the last debit item, and not 4.80, which is the highest selling price.

The profit as shown is not final. The balance on hand may not realize 4.78. Even if it did, there would still be interest on the 30-day bill of January 1, and on the overdraft caused by the bill due at sight in London on January 5 and not covered until January 15 and also by the cable transfer of January 20 which would not be covered until the sight draft sent January 15 reached London. The London correspondent may also charge a commission for handling the business.

Problem 4:

A distinction is made between funded debt and unfunded debt. Please define and compare, discussing the advantages and disadvantages, if any, attaching to each.

Solution:

The distinction between funded and unfunded debt is founded on the length of time within which the debt is payable. Montgomery speaks of "funds and other permanent investments." Dickinson speaks of "permanent or long term loans or funded debt—as representing permanent capital."

As long term loans are usually in the shape of bonds due at a fixed time in the more or less distant future or redeemable at the pleasure of the issuing corporation, the term "funded debt" is generally considered to mean bonded debt or at least long time mortgage liability.

The great advantage of a funded debt is that the concern that owes it does not have to provide ways and means for meeting it as a present proposition, whereas unfunded debts have to be met within three or four months, either by payment or by renewal. The funded debt guarantees to a corporation a certain amount of loan capital at a fixed rate of interest, so that it is not subject to the fluctuations of the money market in respect to the amount of the loan or the rate of interest that it may have to pay.

A concern with a very large floating or unfunded debt may find itself at a time of tight money unable to renew its loans, and may thus be forced into the hands of a receiver. There is always ample time to provide for a new funded loan, if the corporation owns fixed assets that are ample security for it, and in the meantime there is no danger of trouble, if interest is promptly paid. In addition, a corporation that is at all prosperous can provide for the eventual payment of its funded debt by mak-

ing comparatively small annual contributions to a sinking fund. Of course, if the debt were not funded the same annual amounts could be used for its gradual reduction, but in the absence of compulsion it is not likely that it would be.

The funding of the greater part of its indebtedness gives a concern better credit when asking for temporary loans from banks. A bank bases its estimate of a borrower's financial standing principally upon the preponderance of active assets over active liabilities. It expects its loans to be paid long before the bonds mature, and therefore is satisfied if the borrower is certain to pay the bond interest.

The disadvantage of a funded debt is that it is not elastic. A business may need large amounts of money for only a portion of the year. If it provides nearly all of its "peak load" by issuing bonds, it will be obliged to pay interest for a whole year for only a few months' use of the money. It can offset this expense to a certain extent by taking out time certificates of deposit from banks, or by buying commercial paper from brokers. If its indebtedness includes enough short time notes, it can save all the interest on idle money by paying off notes as they come due. In case of a permanent reduction in borrowing needs, a business can always pay off its floating debts, but may not find it possible to redeem any of its bonds, the very fact that it is anxious to do so making the holders unwilling to sell, except at a considerable premium.

For a business that needs large amounts of money for short periods only a combination of the two kinds of indebtedness is most advantageous, when possible. When the value of the fixed assets will justify it, such a concern may provide for more bonds than it needs to issue permanently, leaving a certain amount in the treasury. These treasury bonds may be used as collateral for short time loans at more favorable rates usually than it would have to pay on unsecured notes. This will enable it to reduce its dependence upon banks for unsecured loans, or perhaps eliminate it altogether.

INCREASING CAPITAL STOCK OUT OF SURPLUS

Editor, Students' Department:

SIR: In connection with an increase of capital stock I have encountered a situation which does not appear to be treated in the accounting works which I have consulted nor do I find a discussion of the point in question in THE JOURNAL OF ACCOUNTANCY.

A corporation with an authorized capital stock of \$150,000 is increasing its capital stock to \$200,000, the increase in stock to be made from the surplus account and the stock to be issued to the company, in its name, to be held in the treasury as an asset. The \$50,000 worth of stock issued to the company is considered an investment and it is desired to show the same on financial statements as an asset. It is not to be sold, but is to be held by the company.

From the information available it would appear to the writer that the following entries would be in order:

Surplus	\$50,000.00	
Capital stock		\$50,000.00
Increase of capital stock from \$150,000 to \$200,000 out of surplus		

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Treasury stock	\$50,000.00	
Donated capital		\$50,000.00
500 shares of stock at par issued to and held by the company as working capital		

Please advise me if the above entry is correct or recommend some book or authority whereby this matter can be adjusted. Also, will you please state how a procedure of this character is looked upon by the banks and credit agencies?

I shall feel greatly obliged to you for your opinion and suggestions.

Very truly yours,

M. N.

Philadelphia, Pennsylvania.

The entries as given in the letter are wrong, because they purport to record action that was not taken. The stock representing the increase did not reduce the net worth of the corporation, because while it added \$50,000 to the liabilities, an equal asset of treasury stock was added to the assets. The stock is erroneously called treasury stock because it has never been paid for and issued and been since reacquired by the company. It is unissued stock. Again, the credit to donated capital does not represent the truth. A donation must be made by a donor, the corporation cannot make a present to itself—it cannot be at the same time donor and donee. If it is desired to segregate part of the surplus so that it will not be available for dividends, it may be done by a simple journal entry, debiting surplus and crediting permanent surplus, special reserve or some other account with a similar name that will indicate its special character. It must be borne in mind, however, that the same authority, whether officers, directors or stockholders, that set up the special account can cancel it at any time and throw the amount back into surplus, unless there is a contract with bondholders or other creditors requiring the account.

The proper way to bring about the result that the company seems to desire is to procure an agreement from all its stockholders that they will donate to the company the entire amount of stock to be given them in a proposed stock dividend. Then the procedure will be as indicated in the following entries.

Surplus	\$50,000.00	
Stock dividend		\$50,000.00
Dividend declared at meeting, etc.		

Stock dividend	\$50,000.00	
Capital stock		\$50,000.00
Payment of stock dividend by distribution of new stock to stockholders.		

(Note. This could also be done by charging stockholders and crediting capital stock, and then by charging stock dividend and crediting stockholders.)

Treasury stock	\$50,000.00	
Donated capital		\$50,000.00
Stock donated by stockholders.		

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The stock having been paid for by the dividend and issued to the stockholders is now true treasury stock, and having been donated to the corporation is now true donated capital. There is nothing to prevent the stockholders from crediting donated capital to surplus again. In fact, the directors can do it, unless the stockholders forbid it in the deed of gift.

Banks and credit agencies cannot but look with favor upon any move which increases working capital, whether by the faulty method outlined in the letter, or by the out-and-out gift of a large sum by the stockholders.

DIVIDING PARTNERSHIP PROFITS

Editor, Students' Department:

SIR: Will you kindly explain why it is incorrect for a partnership to carry its original investment in one account and subsequent undivided profits in another?

If the members of a partnership decide to carry their accounts in this manner is there any ruling which prohibits their calling the account carrying undivided profits "surplus"?

It appears to the writer that the principal difference between a partnership and a corporation involves the legal status rather than accounting methods, and the existing difference in accounting methods is based on custom rather than logic.

In order to furnish the information required by the partnership excess profit tax returns, it would facilitate matters if a partnership chart of accounts corresponded as closely as possible with a corporation's.

Yours very truly,

Providence, Rhode Island.

H. H.

It can hardly be said to be incorrect for a partnership to carry its undivided profits separately from its invested capital, but there are several reasons why it is not usual.

I take it for granted that you do not mean that there should be one capital account for the entire capital of the firm, but that there should be a capital account for each partner. The way you express it implies the single account. There should always be a personal capital account with each partner, since in a partnership the personality is an important element.

When the profits are determined they should be at once distributed to the partners, but there is nothing that requires that they shall be added to the capital accounts, unless the articles of partnership call for such action. They can be credited to the personal or drawing accounts of the partners, if they so agree. If this is done, they are subject to the demands of the partners.

The objection to leaving the profits in one general surplus account is principally because it is useless. In a corporation such an account is a necessity, because the capital stock account is a fixed amount and cannot be changed by the addition of profits. Besides, the stockholder has no right to demand his share of the profits, as has the partner.

The existence of drawing accounts is another reason for the prevalent method. Of course, partners' debit balances must be eliminated, necessitating at least a partial division of the profits, for credit to the drawing accounts. Otherwise there is danger of an ignorant person's making the egregious blunder of charging partners' drawings to profit and loss.

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However, if the partners prefer to leave the remainder of the profits in a surplus account, there is nothing to prevent their doing so. Unless the partners share profits equally, there would then be no indication in the accounts as to the amount of the interest of each partner.

It will therefore be apparent that the difference, which, as you say, involves the legal status, also affects the accounting procedure.

I cannot see that the information necessary for the determination of excess profits is more easily obtained by keeping a surplus account in a partnership. The surplus account is not a measure of the profits made: it is merely the remnant of profits not divided. The measure of profits made is the net credit balance of the profit and loss account, when every item has been included. This is what must be dealt with in preparing the income tax report. The amount is not affected by the action taken with it, whether credited to the partners' drawing accounts, to their capital accounts or to surplus.

Harvard School of Business Administration

Owing to the fact that numerous students received their discharge from government service too late to take advantage of the regular session, the Harvard graduate school of business administration will conduct a special session from January 27 to August 30, 1919, inclusive. The session will be divided into two halves, the first to extend from January 27 to May 10, inclusive, and the second from May 12 to August 30, inclusive. There will be no recess during the special session.

Requirements for admission as regular students and candidates for the M. B. A. degree have been modified in the following particular. Students who are not holders of the bachelor's degree from an approved college or scientific school will nevertheless be admitted provided they were entitled to senior rank in an institution of this kind at the beginning of the academic year 1918-19, and for a period of at least six months have been engaged in the military or naval service of the United States or of one of the countries associated with the United States, or have been engaged in civilian war work.

Additional information may be obtained at 17 University hall, Cambridge, Massachusetts.

David Elder announces that he has retired from the firm of Mackay, Irons & Co. and has formed a partnership with C. D. Fairweather and William Pate to practise under the firm name of David Elder & Co. with offices at 15 William street, New York.

Mackay, Irons & Co. announce that David Elder has retired from partnership in the firm and that W. E. Crichton has been admitted into partnership as of January 1, 1919.

Correspondence

"Credit of the Nations"

Editor, *The Journal of Accountancy*:

SIR: I ask your attention to a book lately issued, purporting to give authoritative information as to international finance. An extract follows:

CREDIT IN THE UNITED STATES

We are now able to see how, in actual practice, the international account which for the first three years of the war showed a credit in our favor of \$6,864,700,000, was balanced, and how much gold was imported in this settlement. From August 1, 1914, to August 17, 1917, the excess of imports over exports of gold was \$1,111,958,000,* or more than the whole stock in the treasury before the war.

* *Federal Reserve Bulletin*, September, 1917, p. 655.

The total result for the three years may be expressed approximately in the final international balance-sheet for three years (in millions):

Cr.		Dr.	
Merchandise balance	\$6,865	Securities returned	\$2,200
Remittances to friends (3 years)	750	Loans by non-government institutions	1,570
Relief funds	90	Loans by the United States..	2,149
		Dividend account (3 years).	600
		Freights and insurance (3 years)	75
		Imports of gold.....	1,111
	<hr/>		<hr/>
	\$7,705		\$7,705

(The above is extract from *Credit of the Nations*, by J. Laurence Laughlin. Charles Scribner's Sons, New York, 1918—pp. 340 & 341.)

You will note the author says "We are now able to see, etc." Perhaps "we" can. I would have to use a reversing mirror to see, however. Not only are the items classified as "assets" and "debts" on what we consider the wrong side, but they are mixed up at that.

Thus, our gift to relief funds abroad—\$90,000,000—is classified as a "credit" to be offset by "imports of gold" from abroad, and similar treatment is given to "remittances to friends" abroad.

Some obfuscation of mind might cause one to feel that the relief to the Belgians was a "credit" to us, but for accounting purposes it is a credit only on the books of the Recording Angel. But I can think of no reason for putting the "remittances to friends" on the wrong side, unless the writer was like a bookkeeper I once knew who kept a desk card reading "Debit side, the side nearest the hatrack," and who went wrong when his object of reference was moved. Who moved the professor's hatrack?

Besides all this, the account balances as it stands, although when the items are properly grouped, there is a difference of \$1,680,000,000. Won't Mr. Laughlin please explain whether this book was intended as a companion to *Alice through the Looking Glass*.

Yours very truly,

Brooklyn, New York.

F. W. T.

Book Review

THE FINANCING OF PUBLIC SERVICE CORPORATIONS, by
MILTON B. IGNATIUS, LL.M. *The Ronald Press*, New York.

The author states in his preface: "It has been my aim to offer in this one volume a comprehensive discussion of all the important aspects of public service corporation financing, from the inception of the enterprise and the issue of certificates of interest or indebtedness to the expenditure of the proceeds and the permanent record thereof." We need not quarrel with the author's aim, which we think he has successfully carried out, considering that the book was intended by him mainly for the use of corporation officers, bankers and brokers and others directly interested in one way or another in public utilities; but it is only fair to warn students of accountancy that fully two-thirds of the volume of 500 pages is devoted to elementary principles and definitions that they will have acquired already in standard works on corporation accounting. The really interesting part of the work to accountants will begin with part IV, chapter XIII, where the author takes up the subject of public regulation through commissions. It is a very fair and impartial study of the various problems. Mr. Ignatius has been on both sides of the fence and is well qualified in consequence.

There are two rather significant points the author lays some stress upon in which we think most of his readers will agree with him: that in spite of all their vehement disclaimers of responsibility regulating commissions do offer the investing public a moral, if not a legal, guarantee of public utility securities which they approve, particularly, we might add, when proposed issues are modified in accordance with suggestions from the commissions; and that there is great danger to the future public usefulness of regulating commissions in the growing tendency to make positions on these commissions political rewards for party services. While Mr. Ignatius does not say nor imply in any way that there is any relation between these two facts, it requires but little reflection to see that there is bound to result a very close relationship. What is more natural than for a commissioner who has received his appointment as a reward for political services to help along deserving henchmen who may wish to exploit public utilities?

There is one feature of public regulation with its curious combination of legislative, executive and judicial powers upon which the author does not seem to touch. This feature is the inevitable mesh of red-tape in which every commission eventually finds itself wound up more or less. It is inevitable in the very nature of its being. Every decision sets a precedent which is appealed to in later cases, until in the end a good part of a commission's time and labor is devoted to seeking ingenious distinctions. This tendency is marked enough in the courts, and it is further enhanced and complicated in utility hearings by the injection of engineering, financial and accounting features until one wonders that the commissions are

able to effect as much as they do—and it cannot be denied that they have accomplished marvels. Nevertheless, when it becomes necessary for the federal government to take over the largest public utility in the country in order to get service, it does look as if the regulating commission had failed somewhere. It was a war measure to be sure, but oddly enough the government seems strangely averse to allowing the commission to resume its powers now that peace is coming, and proposes instead to show us what it, the government, can do in the way of efficient service. What, then, is the trouble with public regulation by commissions?

W. H. L.

Bertram D. Kribben

We announce with deep regret the death of Bertram D. Kribben, member of the council of the American Institute of Accountants.

Mr. Kribben for many years had been one of the most active members of the Institute, and his services, particularly on the committee on education and board of examiners, will always be remembered as of the utmost value.

Mr. Kribben was a member of the state board of accountancy of Missouri and a member of the St. Louis bar.

The entire accounting profession is the poorer for the loss of this most able and valued member.

George Alton Torrey

George Alton Torrey, an associate of the American Institute of Accountants and a certified public accountant of the state of Washington, died of pneumonia December 28, 1918, at Seattle, Washington. Mr. Torrey passed the examinations of the institute in June, 1917, and was rated second among those who passed with distinction.

Correction

The article entitled *Outline of a Cost Accounting System for a Wooden Ship Yard* by Frederick W. Davis, appearing in the January issue of THE JOURNAL OF ACCOUNTANCY consisted largely of matter taken verbatim from general circular 60 of the auditing division, Emergency Fleet Corporation, which was prepared and signed by Gordon Wilson, who at the date of the circular (August 27, 1917,) was assistant general auditor of the United States Shipping Board. Proper credit for such reproduction was omitted. This explanation is offered with apologies to Mr. Wilson.

Frederick B. Hill & Co. announce the opening of offices at Haddington building, Norfolk, Virginia.

Leslie, Banks & Co. announce that Charles Griswold Bourne has become a member of the firm.

The Journal of Accountancy

Official Organ of the American Institute of Accountants

Vol. 27

MARCH, 1919

No. 3

Work of the Excess Profits Tax Investigator*

BY R. G. CRANCH

Investigators under the excess profits tax law require two distinct branches of preparation: first, in the practical interpretation of the law and its application to difficult cases and, second, in those principles of accounting which control and govern the correct determination of earnings and invested capital.

The excess profits tax investigator must recognize only one standard in his work, and that is absolute fairness and justice in the application of the law, without attempting to favor either the taxpayer or the government. Where there are two possible solutions to a problem in taxation, the solution that most nearly accords with common sense should be chosen, even though a purely technical interpretation of the law might yield a greater revenue to the government. It is equally important that no taxpayer should be permitted to evade just taxation through mere technicalities, when the spirit and intent of the law have been violated.

While the legal side of the internal revenue service is intensely interesting, we must pass on to our subject, which involves the relation of accounting principles to the work of the excess profits tax investigator.

The object of the science of accounting might be described, from the practical point of view, as the accurate determination of the net worth of various businesses, the fixing of the true amount of their earnings, and the ways and means by which those earnings may be legitimately increased by better methods, both in production and in the elimination of waste.

*An address delivered before the internal revenue agents and inspectors of the Philadelphia division January 18, 1919.

From this brief practical definition, it is clear how closely the work of the accountant is allied to that of the excess profits tax investigator. In fact the chief difference between the work of these two classes of men is that the accountants are called upon to determine the results in the first instance, before even the owners of the business have decided what would be a fair statement of their profits, while the excess profits tax investigator nearly always finds carefully prepared statements of earnings and of net worth, his chief function being to verify legitimate items and to call in question all illegitimate items and conclusions. We must always remember that destructive criticism is easier than the doing of constructive work and be a little careful how we tear down what others have built up, until we have something better to put in its place.

One will frequently find statements of earnings and net worth, some of them prepared by public accountants, which leave much to be desired in the way of clearness and accuracy, but before rejecting them as unfair, one should find out if the practical circumstances would permit an internal revenue agent to make better statements. If not, then the best practical adjustment will have to be made, guided almost exclusively by common sense and a desire to be fair to all parties concerned.

There are a few concrete suggestions in regard to investigations, which I would like to submit, from my past experience as a public accountant, for consideration and discussion.

First, I would emphasize the importance, wherever possible, of actually seeing the physical property which goes to make up the invested capital of the company being investigated. In this way one will soon secure a working knowledge of about how much machinery, building construction, mine tunnels or other assets should be represented by an expenditure of \$10,000.00, \$100,000.00 or \$1,000,000.00, in the industries which are common in the district. Of course, you will constantly be meeting exceptional cases, but the broader your experience grows, the easier it will be to handle the unusual problems.

If you have carefully examined a detailed asset and liability statement and profit and loss account, covering the business you are investigating, and then thoroughly inspect the operations of

Work of the Excess Profits Tax Investigator

the plant, you will be surprised how readily and quickly you can put yourself in a position judiciously to question the taxpayer regarding the results of his business.

This introduces a second suggestion, which is that you study briefly, but most carefully, the character of the men with whom you are dealing. The men you will meet can be roughly divided into three classes :

- a. Those whose actions are plainly guided by principles of right and justice.
- b. Those who believe "honesty is the best policy," but don't hesitate to put a selfish and narrow construction on that policy, and
- c. Those who deliberately plan to defraud the government of taxes due and would defraud anyone else, provided the opportunity presented itself and they were not afraid of being found out.

The surest way to draw a man out, without giving offense, is to take a genuine interest in the growth and development of his business. This is not hard, for if a man loves his work as an accountant or as an excess profits tax investigator, he will have a keen interest in the success of his work, which after all is bound up with and dependent upon the success of the business man and taxpayer.

If a man feels that you take a personal interest in his business, he will take pains to see that you have a correct understanding of it. Every time you reach such a correct understanding of a man's business, your future work is made easier.

In the handling of the human element in making tax investigations, it is of the utmost importance to prove to the taxpayer the intention and desire of congress and the bureau of internal revenue to treat the public fairly. Often a taxpayer will be nursing a grievance, which can be entirely removed by a straightforward explanation. I have in mind a man in New York who believed it was grossly unfair for the government not to allow the deduction of income taxes as an expense of the business.

After explaining how impracticable it would be for the government to make such an allowance, due to the resultant shrinkage of revenue in following years, and after explaining further that the government, under the stress of war and our struggle for national existence, had a right to consider itself a partner

in every man's business, this particular taxpayer was well satisfied to regard his payments to the government as a division of the profit, rather than as a business expense. This simple explanation cleared his mind of a feeling of grievance, and in spite of the assessment of considerable extra tax, I firmly believe that he had a more friendly feeling toward the government after the verification of his income tax return than before.

Probably the most difficult and unpleasant type of excess profits tax investigation is that covering cases of intentional fraud. In these cases there are hardly any limits to which the internal revenue agent is not obliged to go in order to right the wrong, and the procedure of examination will have to be as thorough and comprehensive as that adopted by the most skillful of the public accountants who are engaged to uncover defalcations and other business dishonesty. It would take many hours to discuss the matter of fraudulent returns; therefore we proceed to the consideration of more normal cases.

The great bulk of our tax recoveries is not made from the deliberately dishonest class, but is rather the result of returns made without full knowledge of how the tax laws apply. Also there are heavy recoveries to be made from companies whose business methods have been so conservative that they have never allowed their full earnings to appear in their profit and loss account or balance-sheet. In such cases a knowledge of accounting will be found very helpful.

This brings us to a third suggestion, relative to the best methods for making detailed verification of the items appearing on the balance-sheet. In this work probably the greatest difficulties encountered will be to ascertain that the original or March 1, 1913, values on the balance-sheet represent bona fide cash values, and what items appear at figures above or below actual cash values.

One great stumbling block which will be frequently found is the excessive valuation placed upon certain assets in order to meet the legal requirements covering the issuance of stock full-paid and non-assessable. Many taxpayers try to avoid a search into such legally established values for fear that the result will have some effect in undermining the legality of the stock issue. To this objection I have always answered that adequate legal

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consideration and fair cash value for taxation purposes do not need to be the same—in fact frequently cannot be the same under the regulations prescribed by the internal revenue service.

The internal revenue agent cannot be expected to have the same knowledge as to plant values that is possessed by the professional appraiser, but his daily experience will soon enable him to detect rank overvaluation of assets, and where this condition exists he is forced to seek some remedy. Usually the best way is to make such an investigation of the original costs and subsequent additions as will reveal the source of the padded valuation. It will sometimes be found that plant values have been improperly built up through capitalizing renewals and sometimes even supplies. In other cases one will find a mixed total of tangible and intangible property given for capital stock, making it difficult to secure a separate valuation of the physical property. Sometimes one will find new appraisements ingeniously worked into the book values in such a way as to conceal the true costs.

Insurable values are frequently obtainable, and often make a very good basis for criticism of the plant values shown in the books. I have in mind one case where a common sense knowledge of machinery values satisfied me that the figures submitted were seriously inflated. The first attempt was to establish the overvaluation through a comparison with costs, but this was not satisfactory, because much of the plant was about forty years old. It was very apparent, however, that many items of maintenance had been capitalized.

As costs were not available in any serviceable form, we turned to insurable values, found that the plant had been carefully appraised by mutual fire insurance underwriters, and that the insurable value was much below the capital value claimed. We then based the invested capital figures on the appraisal of the fire underwriters, which was the maximum figure we felt that the taxpayer could justify.

Closely connected with the question of plant values and appraisements is the question of depreciation. Thanks to the invested capital clauses of the excess profits tax law, this question is a little easier to deal with than formerly.

If a man wants to take an excessive depreciation into the income account, the solution lies in insisting that the same high depreciation must be used in arriving at his invested capital. In

this way you can set the taxpayer's desire for a high depreciation to be charged against earnings in his income account against his desire for a high invested capital, thereby arriving at a happy medium.

Reserves for bad debts and some other reserves, while they may be justified from the accounting point of view, must be cut out in considering tax returns, as they do not represent expenses or losses which are completed transactions.

Depreciation of inventories is a frequent source of tax evasion. Of course the new rule permitting inventories to be taken at cost or market prices, whichever are lower, constitutes a very liberal provision, and care must be taken that the taxpayer does not abuse his privileges to evade legitimate taxation. Some taxpayers believe they have the right to inventory on the basis of cost or market prices, whichever are higher. It is easy to see that if this were permitted great efforts would be made to swing a part of the 1918 profits over into 1919 by this method, in order to secure the benefit of the presumably lower rates of 1919.

Many times evasion will be practised by completely eliminating large items from inventories on the plea that they are worthless. Of course, if this action is not based on the facts, it will soon prove a boomerang, because when the merchandise is used, it cannot be included a second time as a cost of goods manufactured. If the tax rate has decreased since the time of the improper writing down of the inventory, the taxpayer is ahead, but if it has increased since that time, the taxpayer is going to pay more tax than his actual earnings demand. A taxpayer with fraudulent intent, when faced with this condition, is not unlikely to change the figures of his previous inventory. This must be watched very closely by comparison with the returns of the previous year.

Great care must be taken to see that the liabilities are accurately stated, and that no loans to the company are camouflaged as part of the invested capital.

There are many suggestions to be considered in the verification of the income account. In a company which keeps good and accurate accounts it is often the best practice to examine the income account first, but in all cases of rough or approximate records I like to consider the invested capital first, on account of the insight it gives into physical values and operating processes.

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It is very good practice in verifying the income or profit and loss account, to turn first to the surplus account (or capital account if you are investigating a partnership); determine the net worth of the business at the beginning of the period and at the end of the period; and then to the increase in net worth add all dividends or drawings paid out during the year. This will give you the figure with which the profit and loss account must be brought into agreement. Of course a close inspection must be made of all special surplus or adjustment accounts to determine that part of the earnings has not been diverted from the usual channels in order to make the income appear smaller than it really is. The plea is frequently made that certain earnings are the result of previous years' operations, and that they should not enter into the current profit and loss account. In such cases you will sometimes find income transferred directly to surplus account, which must be brought back into the income for the current period, unless amended returns are filed for the previous period.

Revenue agents should fully realize the value and importance of the basic principle of double-entry bookkeeping, that the net income revealed by the profit and loss account must reflect itself in the asset and liability statement by an increase in the net worth of exactly the same amount, if no dividends have been paid. If dividends have been paid the increase in net assets, plus the dividends, will exactly equal the income reported for the year.

A great step forward was taken by the department when it first required the taxpayer to report his gross sales, cost of sales and gross income as adjusted by inventories, from which are then deducted the allowable expenses. Formerly the confusion as to how gross income should be calculated made a great deal of trouble for examining officers, while now it is relatively easy, for nearly all companies have a satisfactory record of gross sales.

Wherever there is the least doubt as to the honesty of the taxpayer, every effort should be made to see that his gross sales fairly represent the total production of his factory, as adjusted by inventories. Very useful partial proofs of the accuracy of the gross sales can be secured in indirect ways, according to the nature of the business. If the finished product is nearly all composed of metal, or if the metal used is represented by a uniform percentage of the total weight of shipments, a rough proof can

be obtained by comparing the weight of metal consumed with the sales reported, with an allowance of course for wastage and inventory changes.

Frequently the rough production records of a factory will show the number of machines produced, which should be accounted for either in sales or as an increase in inventory. The advantage of going back to the factory records is that they are less likely to have been dishonestly tampered with in order to defeat the purposes of an honest examination.

In the case of yarn spinners, the yarn produced should bear a definite relation to the wool purchases. In other businesses there are other ways of proving the honesty of the gross sales reported, and this is one of the most vital points in those cases where fraud is suspected.

In the case of a coal mine, the railroad weights of shipments can be used as an almost perfect proof of how many tons should appear in the sales accounts. In cases of suspected fraud such information could be obtained direct from the railroad after securing proper authority.

There is considerable difference of opinion as to what should be allowed under cost of sales. I believe that this should be confined to direct labor and direct material. In many cases this item should receive peculiarly careful verification in order to determine that it does not include payments at higher than market prices to affiliated companies or to other favored parties. In extreme cases of this kind, the revenue agent should secure authority for the making of a consolidated return, as frequently the interrelated companies do not own as much as 95% of each other's stock, and therefore do not come under the ordinary application of the rules covering consolidated returns.

Of course the general expenses must receive careful consideration. Here you will find donations to be disallowed, excessive and illegitimate traveling expenses, private automobiles charged to company expenses, capital expenditures made to look like expenses, and the thousand and one other items constantly appearing on the border lines between legitimate expenses and impositions on the government.

The deductions for losses should be subject to very close scrutiny. The chief difficulty is definitely to justify them as losses of the period under review, although of course you will occasion-

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ally find losses claimed which are nothing short of ridiculous, such as the cutting in half of normal expenditures on the plea that values are temporarily inflated.

Depreciation we have already considered under invested capital, but there is one additional point to be mentioned. The standard forms call for an allowance for depreciation, from which shall first be deducted the cost of repairs and maintenance, the balance only to be charged to profit and loss. A recent court decision points out that repairs and maintenance are no part of the allowance made for depreciation, but that depreciation represents the loss, which is gradually reducing the value of the property to the point where it must be discarded as worthless, and is over and above all maintenance and repair charges. This is common sense accounting, and will no doubt be recognized by the department, though of course under this interpretation the rates would be lower than where depreciation is expected to cover maintenance and repair charges, as well as the gradual extinguishment of the effective life of the machine.

In closing, I will summarize briefly a few of the important points:

1. See the physical property you are dealing with to obtain an understanding of its real value.
2. Know the man you are investigating and fit the thoroughness of your examination to his probable character.
3. In verifying the assets shown on the balance-sheet keep constantly in mind the influences which would cause the taxpayer to use book values which are different from the cash values, such as the legal necessity for issuing capital stock full-paid and non-assessable.
4. In verifying the liabilities take special care to see that all liabilities are bona fide, and do not allow the inclusion of credit balances in favor of interested parties, made to cover up and support improper charges to expenses.
5. In verifying capital accounts and surplus, see that no loans from deceased partners or others are allowed to appear as capital, and that reserve accounts included as capital have not also been written off to the expenses.

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6. In verifying income satisfy yourself that the gross sales are correct, and that all income items are proved in aggregate by the results shown in the balance-sheet.

Last, but not least, remember that fairness to the honest taxpayer demands that the revenue agent pursue his work diligently, and in such a way as to lose the minimum of tax income justly due to the government.

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Published monthly for the American Institute of Accountants by
THE RONALD PRESS COMPANY, 20 Vesey Street, New York, N. Y.
Thomas Conyngton, President; L. G. Henderson, Secretary;
Hugh R. Conyngton, Treasurer.

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Editor

EDITORIAL

The Revenue Act, 1918

THIS issue of THE JOURNAL OF ACCOUNTANCY might fitly be described as "income tax number." The text of titles 1, 2, 3 and 14 of the revenue act of 1918 are printed in the income tax department and occupy the bulk of the magazine.

No apology is necessary for this extended reproduction of the tax provisions of the revenue act. No piece of legislation is of comparable importance with it from the accountant's point of view, and while most readers of THE JOURNAL OF ACCOUNTANCY have seen the full text of the law it is desirable that they should have in the magazine all those provisions to which reference will be made in later issues in the form of treasury decisions, court judgments, etc.

The revenue act of 1918, of course, is far from perfect. It seems to be humanly impossible to prepare a taxing measure which will be regarded as faultless. But taken as a whole the act is an infinite improvement upon its predecessor, and we believe that by means of judicious administration it will be productive of an enormous amount of revenue with a minimum of public discomfort.

No government can extract six billion dollars from the pockets of one hundred million people and avoid annoyance and even actual injustice. Probably many of the taxpayers of the United States will feel themselves seriously aggrieved by the methods of administration adopted by the treasury department, and no doubt many of them will have good grounds for their complaints. But these things are inseparable from taxation on a grand scale. The

probability is that the great bulk of taxes will be assessed and collected without undue annoyance to the taxpayer, and without arousing general opposition.

Most Americans feel that the greater the amount of taxes raised, provided the proceeds be judiciously used, the better for the country at this particular time. We are saddled with a stupendous national debt and we enjoy enormous national prosperity. It seems, therefore, that the course of wisdom is to wipe out as much of the debt as is practicable during these times of prosperity and thus rid posterity of a burden of continuing debt.

The four Liberty bond issues and the fifth, if it be issued, will make demands upon the national treasury to an unprecedented extent. It will be well to meet all obligations even before the date of their maturity if it can be done without jeopardizing the stability and efficiency of the business machine of the country.

The new revenue act provides for a levy upon practically everyone outside the class of unskilled labor. The taxes run in the case of high incomes to a point which leaves comparatively little for the pocket of the taxpayer, but we do not hear complaints as to the burden of taxation. The public demands an equitable and fairly administered tax law. So long as it has that there will be no widespread opposition to paying our bills as a nation.

After the tax has been collected, however, the public will demand that some attention be paid to the fundamental principles of economy. We have run into a time of billions, and it will be hard work for the national mind as expressed in government to get back to thinking in mere millions. Thousands, of course, are inconsiderable.

It is to be feared that we were not long enough in the war. The people of the country were beginning to feel the pinch of war and to learn the value of conservation and saving. The government, however, reached the point of magnificent ideas without having experienced any difficulty in obtaining money, and a spirit of extravagance of the most ridiculous kind pervaded congressional and administrative departments of the government.

The Republicans having acquired control of both houses of congress are making loud protestations of their intentions to supplant extravagance by economy, to call a halt on unconsidered expenditures—and generally to clean house. The history of party government reveals many such protestations and comparatively few ful-

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fillments. But it is to be hoped that at least some of the undertakings of what has now become the majority party may be carried out. Goodness knows there is room for improvement.

The public will not protest against heavy taxation fairly applied, but it will protest vigorously and effectively against continued disregard of the laws of economy.

It has been said that the new law is an improvement on its predecessor. The double taxation which was created by the 1917 amendment to the 1916 law is ended, and we have a straightforward tax which the ordinary man will be able to understand if he applies himself intelligently to the matter.

Many people are expressing the opinion that the revenue bill is incomprehensible. As a matter of fact, most of those who make this statement have not even read the bill, but going by precedent and bearing in mind the hopeless muddle of 1917 have come to the conclusion that 1918 can be no better.

There are, of course, many things which the ordinary business man would desire to amend in the new act, but it marks so great an improvement that adverse criticism might well be suspended until we see how the administration of the law will turn out. The government has recently had the advantage of the advice of many accountants, and we believe that much of the improvement in the act is due to the influence of expert advisors in the department.

As time goes on the question of income taxation will resolve itself more and more into a science. Ultimately it may not be Utopian to hope that a few men who really understand the principles of taxation will find their way into congress and will be able to embody their ideas in law. We are still in the experimental stage, but finally we shall come to the point where the public may reasonably expect that congress can be relied upon to enact tax measures conforming to the sound principles of business and economics.

Filing Income Tax Returns

Under the provisions of the new revenue act returns must be filed by March 15th accompanied by a payment of 25 per cent. of the amount of the tax estimated by the taxpayer to be due. The law contains a provision that extension of time may be granted in the discretion of the commissioner of internal revenue. This year

the circumstances are peculiar and it is necessary that the treasury, in order to meet certain certificates of indebtedness falling due, should receive the amount of tax revenue required by the law.

With this thought in mind the secretary of the treasury made an announcement to the effect that there would be no extension granted in any case. Apparently he did not stop to consider the effect of such a statement if literally interpreted, and there was in consequence great consternation among taxpayers. The forms were not expected to be available before March 1st, and it was immediately recognized that it would be a physical impossibility for all the taxpayers in the country to make returns within fifteen days after receipt of forms.

The thing was so manifestly impossible that the public came to the conclusion that an extension must be granted whether the secretary agreed or not.

The bureau of internal revenue on February 13th issued a statement, which was printed in part in many of the daily papers, explaining how an extension might be obtained, and this considerably relieved the anxiety of the public. Unfortunately, however, many taxpayers seem to have seen the statement of the secretary of the treasury and to have missed the announcement of the bureau of internal revenue.

In view of the great importance of the question we reproduce in full the announcement of the bureau.

Bureau of Internal Revenue,
Washington, D. C.

Although no general extension of time will be authorized for filing federal income tax returns due March 15, the commissioner of internal revenue has approved a novel feature of tax collection which will serve for all practical purposes as a possible extension of 45 days for the filing of corporation income and excess profits tax returns in cases where corporations are unable to complete and file their returns by March 15.

If a corporation finds that, for good and sufficient reason, it is impossible to complete its return by March 15, it may make a return of the estimated tax due and make payment thereof not later than March 15. If meritorious reason is shown as to why the corporation is unable to complete its return by the specified date, the collector will accept the payment of the estimated tax and agree to accept the revised and completed tax returns within a period of not more than 45 days.

Under the plan adopted for corporation payments and returns, the government will be able to collect approximately the amount of tax due on or before March 15, thus meeting its urgent needs; and corporations actually requiring further time for the preparation of their complete returns will be granted ample time in which to do so.

One of the advantages of this plan is that it relieves the taxpayer of one-half of one per cent. interest per month that would attach to the payment of the taxes under an extension granted at the request of the tax-

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payer. The taxpayer will, of course, not be relieved of interest on such amount as his payment may fall short of the tax found later to be due on the basis of his final return.

Should the payment on March 15 of the estimated tax due be greater than the tax eventually found to be due on examination of the completed return, the excess payment will automatically be credited to the next instalment which will be due on June 15.

Provision for systematically handling this new feature will be made in the construction of the new return blanks for corporations. The new form will be a combined income and excess profits blank, embodied in which is a detachable letter of remittance. Any corporation which finds that, for sufficient reasons, it cannot complete its return by March 15, may detach and fill out the letter of remittance and forward same to the collector on or before March 15, together with a cheque, money-order or draft for the tax due on that date.

If the exact date is not known, the estimated tax due will be paid in this manner. A statement in writing of the reasons why it is impossible for the corporation to complete the return by the specified date must accompany every such remittance.

Individual taxpayers will be given similar privileges in cases in which it is made clear by the taxpayer that the time available is not sufficient to enable him to complete his return by March 15. No reason exists, according to the internal revenue officials, for delaying the filing of the returns of individual incomes, except in unusually difficult cases.

Forms for returns of individual incomes up to \$5,000 will be distributed by collectors within a few days. Forms for larger incomes will be available about February 24. Corporation blanks will be distributed by March 1. Regulations governing the administration of the new income tax will also be available before March 1.

Reading between the lines of this announcement we think it might be safe to say that the taxpayer, corporate or individual, with a valid reason for requesting extension, will have small difficulty if he will observe the rules laid down in the foregoing announcement, estimate the probable tax and send a cheque for 25 per cent. of the amount.

As there will be hundreds of thousands of requests for extension it may reasonably be expected that extensions will be granted without unnecessary questionings and delays.

In other words the bureau of internal revenue realizes that it must coöperate with the taxpayer in order to achieve results, and there is no reason to expect needless rigidity in the administration of the law.

Income Tax Department

EDITED BY JOHN B. NIVEN, C.P.A.

The subject matter in this issue is the new income tax law, to be known as the revenue act of 1918. The text of titles I, II, III and XIV of the act is here published. Title I contains general definitions, title II the income tax law, title III the war profits and excess profits tax provisions, and title XIV the repeal provisions, etc.

Accountants are advised to post themselves on the fundamental features of the law from the statute itself, rather than to depend on outside comment for their information. A thorough perusal is, therefore, recommended. Some of the universally significant points that should be particularly observed by all may, however, be very shortly summarized with profit here:

The new date for filing (Sec. 227), and the payment of the tax in quarterly instalments (Sec. 250), the first accompanying the return.

The normal income tax rates for individuals (Sec. 210-a) and the point at which surtaxes begin (Sec. 211-a).

What items, such as insurance and gifts, may be excluded from individual income (Sec. 213); what credits are allowed for dividends, exempt interest and specific allowances (Sec. 216); what are legitimate deductions (Sec. 214-a), and also what are not (Sec. 215).

The "personal service corporation" (Sec. 200), the income of which, like that of partnerships, is taxed to the members and not to the business (Sec. 218-a and e). But the partnership (Sec. 224) and the corporation (Sec. 239) must nevertheless make a return.

The normal rate for corporations (Sec. 230-a-1); what the previously deductible "excess profits tax" is (Sec. 301-a, first and second brackets) and the "war profits tax" (Sec. 301-a, third bracket), and their rates; the limit on these taxes (Sec. 302); what the "excess profits credit," based on "invested capital," consists of (Sec. 312), and the "war profits credit," based, first, on pre-war earnings and increased capital (Sec. 311-a, 1-2) but with a minimum based on present invested capital (Sec. 311-a-3); what "invested capital" is (Sec. 326-a), being determined from the capital accounts, modified in regard to "intangibles" (Sec. 326-a-4-5) and "inadmissible assets" (Sec. 326-c), as defined in Sec. 325-a. The deductions allowed to corporations (Sec. 234), which do not include "contributions."

Consolidated returns are now required for affiliated corporations by the statute (Sec. 240), in place of merely being the subject of treasury regulations as formerly.

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Where the fiscal year overlaps the calendar year, taxes are paid on proportionate amounts of income at the rates of the respective calendar years (Sec. 205-a, Sec. 335).

The exemptions on Liberty bond interest (given in the December, 1918, issue) must be considered with the limitations on the deductibility of interest paid (Sec. 214-a-2 and 234-a-2).

We also publish two treasury decisions (T. D. 2787 and 2791). The first relates to the earlier income tax laws. The second is of current interest because it settles definitely the status of reserves for federal taxes in the computation of invested capital, the amounts of taxes paid being deductible from invested capital from the dates when they became due and payable.

TREASURY DECISIONS

(T. D. 2791, February 17, 1919).

For the Purposes of Invested Capital, Income and Excess Profits Taxes are deemed to have been Paid out of the Net Income for the Taxable Year for which the Taxes are Levied.

TO COLLECTORS OF INTERNAL REVENUE AND OTHERS CONCERNED:

For the purpose of determining invested capital under title II of the act of October 3, 1917, *income and excess profits taxes shall be deemed to have been paid out of the net income for the taxable year for which such taxes are levied.* Amounts payable on account of income and excess profits taxes for any year *may be included in computing surplus and undivided profits for the succeeding years only for the proportionate part of the year represented by the period of time between the close of the taxable year and the date or dates upon which such taxes become due and payable.* (Read question No. 71, 1918, *Excess-Profits Tax Primer*).

(T. D. 2787, January 31, 1919).

Income tax.

Interest paid by a corporation on mortgage indebtedness which has not been assumed by it is deductible from gross income in returns of income under the acts of August 5, 1909, and October 3, 1913, as payments required to be made as a condition to the continued use or possession of property.

TO COLLECTORS OF INTERNAL REVENUE, INTERNAL-REVENUE AGENTS AND OTHERS CONCERNED:

In ascertaining the net income of a corporation under section 38 of the act of August 5, 1909 (36 Stat., 112), and under section 2, paragraph G (b) (first) of the act of October 3, 1913, which has taken title to real property subject to a mortgage, but has not assumed the indebtedness secured thereby, interest paid on such indebtedness may be deducted from the gross income in a tax return as payments required to be made as a condition to the continued use or possession of the property.

T. D. 1865 of July 14, 1913, is hereby revoked.

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AN ACT

To provide revenue, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE I.—GENERAL DEFINITIONS.

Section 1. That when used in this act—

The term "person" includes partnerships and corporations as well as individuals;

The term "corporation" includes associations, joint-stock companies, and insurance companies;

The term "domestic" when applied to a corporation or partnership means created or organized in the United States;

The term "foreign" when applied to a corporation or partnership means created or organized outside the United States;

The term "United States" when used in a geographical sense includes only the states, the territories of Alaska and Hawaii, and the District of Columbia;

The term "secretary" means the secretary of the treasury;

The term "commissioner" means the commissioner of internal revenue;

The term "collector" means collector of internal revenue;

The term "revenue act of 1916" means the act entitled "An act to increase the revenue, and for other purposes," approved September 8, 1916;

The term "revenue act of 1917" means the act entitled "An act to provide revenue to defray war expenses, and for other purposes," approved October 3, 1917;

The term "taxpayer" includes any person, trust or estate subject to a tax imposed by this act;

The term "government contract" means (a) a contract made with the United States, or with any department, bureau, officer, commission, board, or agency, under the United States and acting in its behalf, or with any agency controlled by any of the above if the contract is for the benefit of the United States, or (b) a subcontract made with a contractor performing such a contract if the products or services to be furnished under the subcontract are for the benefit of the United States.

The term "government contract or contracts made between April 6, 1917, and November 11, 1918, both dates inclusive" when applied to a contract of the kind referred to in clause (a) of this paragraph, includes all such contracts which, although entered into during such period, were originally not enforceable, but which have been or may become enforceable by reason of subsequent validation in pursuance of law;

The term "military or naval forces of the United States" includes the marine corps, the coast guard, the army nurse corps, female, and the navy nurse corps, female, but this shall not be deemed to exclude other units otherwise included within such term;

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The term "present war" means the war in which the United States is now engaged against the German government.

For the purposes of this act the date of the termination of the present war shall be fixed by proclamation of the president.

TITLE II.—INCOME TAX.

PART I.—GENERAL PROVISIONS.

DEFINITIONS.

Sec. 200. That when used in this title—

The term "taxable year" means the calendar year, or the fiscal year ending during such calendar year, upon the basis of which the net income is computed under section 212 or section 232. The term "fiscal year" means an accounting period of twelve months ending on the last day of any month other than December. The first taxable year, to be called the taxable year 1918, shall be the calendar year 1918 or any fiscal year ending during the calendar year 1918;

The term "fiduciary" means a guardian, trustee, executor, administrator, receiver, conservator, or any person acting in any fiduciary capacity for any person, trust or estate;

The term "withholding agent" means any person required to deduct and withhold any tax under the provisions of section 221 or section 237;

The term "personal service corporation" means a corporation whose income is to be ascribed primarily to the activities of the principal owners or stockholders who are themselves regularly engaged in the active conduct of the affairs of the corporation and in which capital (whether invested or borrowed) is not a material income-producing factor; but does not include any foreign corporation, nor any corporation 50 per centum or more of whose gross income consists either (1) of gains, profits, or income derived from trading as a principal, or (2) of gains, profits, commissions, or other income, derived from a government contract or contracts made between April 6, 1917, and November 11, 1918, both dates inclusive;

The term "paid," for the purposes of the deductions and credits under this title, means "paid or accrued" or "paid or incurred," and the terms "paid or incurred" and "paid or accrued" shall be construed according to the method of accounting upon the basis of which the net income is computed under section 212.

DIVIDENDS.

Sec. 201. (a) That the term "dividend" when used in this title (except in paragraph (10) of subdivision (a) of section 234) means (1) any distribution made by a corporation, other than a personal service corporation, to its shareholders or members, whether in cash or in other property or in stock of the corporation, out of its earnings or profits accumulated since

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February 28, 1913, or (2) any such distribution made by a personal service corporation out of its earnings or profits accumulated since February 28, 1913, and prior to January 1, 1918.

(b) Any distribution shall be deemed to have been made from earnings or profits unless all earnings and profits have first been distributed. Any distribution made in the year 1918 or any year thereafter shall be deemed to have been made from earnings or profits accumulated since February 28, 1913, or, in the case of a personal service corporation, from the most recently accumulated earnings or profits; but any earnings or profits accumulated prior to March 1, 1913, may be distributed in stock dividends or otherwise, exempt from the tax, after the earnings and profits accumulated since February 28, 1913, have been distributed.

(c) A dividend paid in stock of the corporation shall be considered income to the amount of the earnings or profits distributed. Amounts distributed in the liquidation of a corporation shall be treated as payments in exchange for stock or shares, and any gain or profit realized thereby shall be taxed to the distributee as other gains or profits.

(d) If any stock dividend (1) is received by a taxpayer between January 1 and November 1, 1918, both dates inclusive, or (2) is during such period bona fide authorized or declared, and entered on the books of the corporation, and is received by a taxpayer after November 1, 1918, and before the expiration of thirty days after the passage of this act, then such dividend shall, in the manner provided in Sec. 206, be taxed to the recipient at the rates prescribed by law for the years in which the corporation accumulated the earnings or profits from which such dividend was paid, but the dividend shall be deemed to have been paid from the most recently accumulated earnings or profits.

(e) Any distribution made during the first sixty days of any taxable year shall be deemed to have been made from earnings or profits accumulated during preceding taxable years; but any distribution made during the remainder of the taxable year shall be deemed to have been made from earnings or profits accumulated between the close of the preceding taxable year and the date of distribution, to the extent of such earnings or profits, and if the books of the corporation do not show the amount of such earnings or profits, the earnings or profits for the accounting period within which the distribution was made shall be deemed to have been accumulated ratably during such period.

BASIS FOR DETERMINING GAIN OR LOSS.

Sec. 202. That for the purpose of ascertaining the gain derived or loss sustained from the sale or other disposition of property, real, personal, or mixed, the basis shall be—

(1) In the case of property acquired before March 1, 1913, the fair market price or value of such property as of that date; and

(2) In the case of property acquired on or after that date, (a) the cost thereof; or (b) the inventory value, if the inventory is made in accordance with section 203.

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When property is exchanged for other property, the property received in exchange shall for the purpose of determining gain or loss be treated as the equivalent of cash to the amount of its fair market value, if any; but when in connection with the reorganization, merger, or consolidation of a corporation a person receives in place of stock or securities owned by him new stock or securities of no greater aggregate par or face value, no gain or loss shall be deemed to occur from the exchange, and the new stock or securities received shall be treated as taking the place of the stock, securities, or property exchanged.

When in the case of any such reorganization, merger or consolidation the aggregate par or face value of the new stock or securities received is in excess of the aggregate par or face value of the stock or securities exchanged, a like amount in par or face value of the new stock or securities received shall be treated as taking the place of the stock or securities exchanged, and the amount of the excess in par or face value shall be treated as a gain to the extent that the fair market value of the new stock or securities is greater than the cost (or if acquired prior to March 1, 1913, the fair market value as of that date) of the stock or securities exchanged.

INVENTORIES.

Sec. 203. That whenever in the opinion of the commissioner the use of inventories is necessary in order clearly to determine the income of any taxpayer, inventories shall be taken by such taxpayer upon such basis as the commissioner, with the approval of the secretary, may prescribe as conforming as nearly as may be to the best accounting practice in the trade or business and as most clearly reflecting the income.

NET LOSSES.

Sec. 204. (a) That as used in this section the term "net loss" refers only to net losses resulting from either (1) the operation of any business regularly carried on by the taxpayer, or (2) the bona fide sale by the taxpayer of plant, buildings, machinery, equipment or other facilities, constructed, installed or acquired by the taxpayer on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war; and when so resulting means the excess of the deductions allowed by law (excluding in the case of corporations, amounts allowed as a deduction under paragraph (6) of subdivision (a) of section 234) over the sum of the gross income plus any interest received free from taxation both under this title and under title III.

(b) If for any taxable year beginning after October 31, 1918, and ending prior to January 1, 1920, it appears upon the production of evidence satisfactory to the commissioner that any taxpayer has sustained a net loss, the amount of such net loss shall under regulations prescribed by the commissioner with the approval of the secretary be deducted from the net income of the taxpayer for the preceding taxable year; and the taxes imposed by this title and by title III for such preceding taxable year shall be redetermined accordingly. Any amount found to be due to the taxpayer

upon the basis of such redetermination shall be credited or refunded to the taxpayer in accordance with the provisions of section 252. If such net loss is in excess of the net income for such preceding taxable year, the amount of such excess shall under regulations prescribed by the commissioner with the approval of the secretary be allowed as a deduction in computing the net income for the succeeding taxable year.

(c) The benefit of this section shall be allowed to the members of a partnership and the beneficiaries of an estate or trust under regulations prescribed by the commissioner with the approval of the secretary.

FISCAL YEAR WITH DIFFERENT RATES.

Sec. 205. (a) That if a taxpayer makes return for a fiscal year beginning in 1917 and ending in 1918, his tax under this title for the first taxable year shall be the sum of: (1) the same proportion of a tax for the entire period computed under title I of the revenue act of 1916 as amended by the revenue act of 1917 and under title I of the revenue act of 1917, which the portion of such period falling within the calendar year 1917 is of the entire period, and (2) the same proportion of a tax for the entire period computed under this title at the rates for the calendar year 1918 which the portion of such period falling within the calendar year 1918 is of the entire period: provided, that in the case of a personal service corporation the amount to be paid shall be only that specified in clause (1).

Any amount heretofore or hereafter paid on account of the tax imposed for such fiscal year by title I of the revenue act of 1916 as amended by the revenue act of 1917, and by title I of the revenue act of 1917, shall be credited towards the payment of the tax imposed for such fiscal year by this act, and if the amount so paid exceeds the amount of such tax imposed by this act, or in the case of a personal service corporation, the amount specified in clause (1), the excess shall be credited or refunded in accordance with the provisions of section 252.

(b) If a taxpayer makes a return for a fiscal year beginning in 1918 and ending in 1919, the tax under this title for such fiscal year shall be the sum of: (1) the same proportion of a tax for the entire period computed under this title at the rates specified for the calendar year 1918 which the portion of such period falling within the calendar year 1918 is of the entire period, and (2) the same proportion of a tax for the entire period computed under this title at the rates specified for the calendar year 1919 which the portion of such period falling within the calendar year 1919 is of the entire period.

(c) If a fiscal year of a partnership begins in 1917 and ends in 1918 or begins in 1918 and ends in 1919, then notwithstanding the provisions of subdivision (b) of section 218, (1) the rates for the calendar year during which such fiscal year begins shall apply to an amount of each partner's share of such partnership net income (determined under the law applicable to such year) equal to the proportion which the part of such fiscal year falling within such calendar year bears to the full fiscal year, and (2) the rates for the calendar year during which such fiscal year ends shall

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apply to an amount of each partner's share of such partnership net income (determined under the law applicable to such calendar year) equal to the proportion which the part of such fiscal year falling within such calendar year bears to the full fiscal year: provided, that in the case of a personal service corporation with respect to a fiscal year beginning in 1917 and ending in 1918, the amount specified in clause (1) shall not be subject to normal tax.

PARTS OF INCOME SUBJECT TO RATES FOR DIFFERENT YEARS.

Sec. 206. That whenever parts of a taxpayer's income are subject to rates for different calendar years, the part subject to the rates for the most recent calendar year shall be placed in the lower brackets of the rate schedule provided in this title, the part subject to the rates for the next preceding calendar year shall be placed in the next higher brackets of the rate schedule applicable to that year, and so on until the entire net income has been accounted for. In determining the income, any deductions, exemptions or credits of a kind not plainly and properly chargeable against the income taxable at rates for a preceding year shall first be applied against the income subject to rates for the most recent calendar year; but any balance thereof shall be applied against the income subject to the rates of the next preceding year or years until fully allowed.

PART II.—INDIVIDUALS.

NORMAL TAX.

Sec. 210. That, in lieu of the taxes imposed by subdivision (a) of section 1 of the revenue act of 1916 and by section 1 of the revenue act of 1917, there shall be levied, collected, and paid for each taxable year upon the net income of every individual a normal tax, at the following rates:

(a) For the calendar year 1918, 12 per centum of the amount of the net income in excess of the credits provided in section 216: provided, that in the case of a citizen or resident of the United States the rate upon the first \$4,000 of such excess amount shall be 6 per centum;

(b) For each calendar year thereafter, 8 per centum of the amount of the net income in excess of the credits provided in section 216: provided, that in the case of a citizen or resident of the United States the rate upon the first \$4,000 of such excess amount shall be 6 per centum.

SURTAX.

Sec. 211. (a) That, in lieu of the taxes imposed by subdivision (b) of section 1 of the revenue act of 1916 and by section 2 of the revenue act of 1917, but in addition to the normal tax imposed by section 210 of this act, there shall be levied, collected, and paid for each taxable year upon the net income of every individual, a surtax equal to the sum of the following:

1 per centum of the amount by which the net income exceeds \$5,000 and does not exceed \$6,000;

2 per centum of the amount by which the net income exceeds \$6,000 and does not exceed \$8,000;

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3 per centum of the amount by which the net income exceeds \$8,000 and does not exceed \$10,000;

4 per centum of the amount by which the net income exceeds \$10,000 and does not exceed \$12,000;

5 per centum of the amount by which the net income exceeds \$12,000 and does not exceed \$14,000;

6 per centum of the amount by which the net income exceeds \$14,000 and does not exceed \$16,000;

7 per centum of the amount by which the net income exceeds \$16,000 and does not exceed \$18,000;

8 per centum of the amount by which the net income exceeds \$18,000 and does not exceed \$20,000;

9 per centum of the amount by which the net income exceeds \$20,000 and does not exceed \$22,000;

10 per centum of the amount by which the net income exceeds \$22,000 and does not exceed \$24,000;

11 per centum of the amount by which the net income exceeds \$24,000 and does not exceed \$26,000;

12 per centum of the amount by which the net income exceeds \$26,000 and does not exceed \$28,000;

13 per centum of the amount by which the net income exceeds \$28,000 and does not exceed \$30,000;

14 per centum of the amount by which the net income exceeds \$30,000 and does not exceed \$32,000.

15 per centum of the amount by which the net income exceeds \$32,000 and does not exceed \$34,000;

16 per centum of the amount by which the net income exceeds \$34,000 and does not exceed \$36,000;

17 per centum of the amount by which the net income exceeds \$36,000 and does not exceed \$38,000;

18 per centum of the amount by which the net income exceeds \$38,000 and does not exceed \$40,000;

~~19 per centum of the amount by which the net income exceeds \$40,000 and does not exceed \$42,000;~~

20 per centum of the amount by which the net income exceeds \$42,000 and does not exceed \$44,000;

~~21 per centum of the amount by which the net income exceeds \$44,000 and does not exceed \$46,000;~~

22 per centum of the amount by which the net income exceeds \$46,000 and does not exceed \$48,000;

23 per centum of the amount by which the net income exceeds \$48,000 and does not exceed \$50,000;

24 per centum of the amount by which the net income exceeds \$50,000 and does not exceed \$52,000;

25 per centum of the amount by which the net income exceeds \$52,000 and does not exceed \$54,000;

26 per centum of the amount by which the net income exceeds \$54,000 and does not exceed \$56,000;

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27 per centum of the amount by which the net income exceeds \$56,000 and does not exceed \$58,000;

28 per centum of the amount by which the net income exceeds \$58,000 and does not exceed \$60,000;

29 per centum of the amount by which the net income exceeds \$60,000 and does not exceed \$62,000;

30 per centum of the amount by which the net income exceeds \$62,000 and does not exceed \$64,000;

31 per centum of the amount by which the net income exceeds \$64,000 and does not exceed \$66,000;

32 per centum of the amount by which the net income exceeds \$66,000 and does not exceed \$68,000;

33 per centum of the amount by which the net income exceeds \$68,000 and does not exceed \$70,000;

34 per centum of the amount by which the net income exceeds \$70,000 and does not exceed \$72,000;

35 per centum of the amount by which the net income exceeds \$72,000 and does not exceed \$74,000;

36 per centum of the amount by which the net income exceeds \$74,000 and does not exceed \$76,000;

37 per centum of the amount by which the net income exceeds \$76,000 and does not exceed \$78,000;

38 per centum of the amount by which the net income exceeds \$78,000 and does not exceed \$80,000;

39 per centum of the amount by which the net income exceeds \$80,000 and does not exceed \$82,000;

40 per centum of the amount by which the net income exceeds \$82,000 and does not exceed \$84,000;

41 per centum of the amount by which the net income exceeds \$84,000 and does not exceed \$86,000;

42 per centum of the amount by which the net income exceeds \$86,000 and does not exceed \$88,000;

43 per centum of the amount by which the net income exceeds \$88,000 and does not exceed \$90,000;

44 per centum of the amount by which the net income exceeds \$90,000 and does not exceed \$92,000;

45 per centum of the amount by which the net income exceeds \$92,000 and does not exceed \$94,000;

46 per centum of the amount by which the net income exceeds \$94,000 and does not exceed \$96,000;

47 per centum of the amount by which the net income exceeds \$96,000 and does not exceed \$98,000;

48 per centum of the amount by which the net income exceeds \$98,000 and does not exceed \$100,000;

52 per centum of the amount by which the net income exceeds \$100,000 and does not exceed \$150,000;

56 per centum of the amount by which the net income exceeds \$150,000 and does not exceed \$200,000;

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60 per centum of the amount by which the net income exceeds \$200,000 and does not exceed \$300,000;

63 per centum of the amount by which the net income exceeds \$300,000 and does not exceed \$500,000;

64 per centum of the amount by which the net income exceeds \$500,000 and does not exceed \$1,000,000;

65 per centum of the amount by which the net income exceeds \$1,000,000.

(b) In the case of a bona fide sale of mines, oil or gas wells, or any interest therein, where the principal value of the property has been demonstrated by prospecting or exploration and discovery work done by the taxpayer, the portion of the tax imposed by this section attributable to such sale shall not exceed 20 per centum of the selling price of such property or interest.

NET INCOME DEFINED.

Sec. 212. (a) That in the case of an individual the term "net income" means the gross income as defined in section 213, less the deductions allowed by section 214.

(b) The net income shall be computed upon the basis of the taxpayer's annual accounting period (fiscal year or calendar year, as the case may be) in accordance with the method of accounting regularly employed in keeping the books of such taxpayer; but if no such method of accounting has been so employed, or if the method employed does not clearly reflect the income, the computation shall be made upon such basis and in such manner as in the opinion of the commissioner does clearly reflect the income. If the taxpayer's annual accounting period is other than a fiscal year as defined in section 200 or if the taxpayer has no annual accounting period or does not keep books, the net income shall be computed on the basis of the calendar year.

If a taxpayer changes his accounting period from fiscal year to calendar year, from calendar year to fiscal year, or from one fiscal year to another, the net income shall, with the approval of the commissioner, be computed on the basis of such new accounting period, subject to the provisions of section 226.

GROSS INCOME DEFINED.

Sec. 213. That for the purposes of this title (except as otherwise provided in section 233) the term "gross income"—

(a) Includes gains, profits, and income derived from salaries, wages, or compensation for personal service (including in the case of the president of the United States, the judges of the supreme and inferior courts of the United States, and all other officers and employees, whether elected or appointed, of the United States, Alaska, Hawaii, or any political subdivision thereof, or the District of Columbia, the compensation received as such), of whatever kind and in whatever form paid, or from professions, vocations, trades, businesses, commerce, or sales, or dealings in property, whether real or personal, growing out of the ownership or use of or interest in such property; also from interest, rent, dividends, securities,

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or the transaction of any business carried on for gain or profit, or gains or profits and income derived from any source whatever. The amount of all such items shall be included in the gross income for the taxable year in which received by the taxpayer, unless, under methods of accounting permitted under subdivision (b) of section 212, any such amounts are to properly accounted for as of a different period; but

(b) Does not include the following items, which shall be exempt from taxation under this title:

(1) The proceeds of life insurance policies paid upon the death of the insured to individual beneficiaries or to the estate of the insured;

(2) The amount received by the insured as a return of premium or premiums paid by him under life insurance, endowment, or annuity contracts, either during the term or at the maturity of the term mentioned in the contract or upon surrender of the contract;

(3) The value of property acquired by gift, bequest, devise, or descent (but the income from such property shall be included in gross income);

(4) Interest upon (a) the obligations of a state, territory, or any political subdivision thereof, or the District of Columbia; or (b) securities issued under the provisions of the federal farm loan act of July 17, 1916; or (c) the obligations of the United States or its possessions; or (d) bonds issued by the war finance corporation; provided, that every person owning any of the obligations, securities or bonds enumerated in clauses (a), (b), (c), and (d) shall, in the return required by this title, submit a statement showing the number and amount of such obligations, securities and bonds owned by him and the income received therefrom, in such form and with such information as the commissioner may require. In the case of obligations of the United States issued after September 1, 1917, and in the case of bonds issued by the war finance corporation, the interest shall be exempt only if and to the extent provided in the respective acts authorizing the issue thereof as amended and supplemented, and shall be excluded from gross income only if and to the extent it is wholly exempt from taxation to the taxpayer both under this title and under title III;

(5) The income of foreign governments received from investments in the United States in stocks, bonds, or other domestic securities, owned by such foreign governments, or from interest on deposits in banks in the United States of moneys belonging to such foreign governments, or from any other source within the United States;

(6) Amounts received, through accident or health insurance or under workmen's compensation acts, as compensation for personal injuries or sickness, plus the amount of any damages received whether by suit or agreement on account of such injuries or sickness;

(7) Income derived from any public utility or the exercise of any essential governmental function and accruing to any state, territory, or the District of Columbia, or any political subdivision of a state or territory, or income accruing to the government of any possession of the United States, or any political subdivision thereof.

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Whenever any state, territory, or the District of Columbia, or any political subdivision of a state or territory, prior to September 8, 1916, entered in good faith into a contract with any person, the object and purpose of which is to acquire, construct, operate, or maintain a public utility, no tax shall be levied under the provisions of this title upon the income derived from the operation of such public utility, so far as the payment thereof will impose a loss or burden upon such state, territory, District of Columbia, or political subdivision; but this provision is not intended to confer upon such person any financial gain or exemption or to relieve such person from the payment of a tax as provided for in this title upon the part or portion of such income to which such person is entitled under such contract;

(8) So much of the amount received during the present war by a person in the military or naval forces of the United States as salary or compensation in any form from the United States for active services in such forces, as does not exceed \$3,500.

(c) In the case of non-resident alien individuals, gross income includes only the gross income from sources within the United States, including interest on bonds, notes, or other interest-bearing obligations of residents, corporate or otherwise, dividends from resident corporations, and including all amounts received (although paid under a contract for the sale of goods or otherwise) representing profits on the manufacture and disposition of goods within the United States.

DEDUCTIONS ALLOWED.

Sec. 214. (a) That in computing net income there shall be allowed as deductions:

(1) All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business, including a reasonable allowance for salaries or other compensation for personal services actually rendered, and including rentals or other payments required to be made as a condition to the continued use or possession, for purposes of the trade or business of property to which the taxpayer has not taken or is not taking title or in which he has no equity;

(2) All interest paid or accrued within the taxable year on indebtedness, except on indebtedness incurred or continued to purchase or carry obligations or securities (other than obligations of the United States issued after September 24, 1917), the interest upon which is wholly exempt from taxation under this title as income to the taxpayer, or, in the case of a nonresident alien individual, the proportion of such interest which the amount of his gross income from sources within the United States bears to the amount of his gross income from all sources within and without the United States;

(3) Taxes paid or accrued within the taxable year imposed (a) by the authority of the United States, except income, war profits and excess profits taxes; or (b) by the authority of any of its possessions, except the amount of income, war profits and excess profits taxes allowed as a credit

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under section 222; or (c) by the authority of any state or territory, or any county, school district, municipality, or other taxing subdivision of any state or territory, not including those assessed against local benefits of a kind tending to increase the value of the property assessed; or (d) in the case of a citizen or resident of the United States, by the authority of any foreign country, except the amount of income, war profits and excess profits taxes allowed as a credit under section 222; or (e) in the case of a nonresident alien individual, by the authority of any foreign country (except income, war profits and excess-profits taxes, and taxes assessed against local benefits of a kind tending to increase the value of the property assessed), upon property or business;

(4) Losses sustained during the taxable year and not compensated for by insurance or otherwise, if incurred in trade or business;

(5) Losses sustained during the taxable year and not compensated for by insurance or otherwise, if incurred in any transaction entered into for profit, though not connected with the trade or business; but in the case of a nonresident alien individual only as to such transactions within the United States;

(6) Losses sustained during the taxable year of property not connected with the trade or business (but in the case of a nonresident alien individual only property within the United States) if arising from fires, storms, shipwreck, or other casualty, or from theft, and if not compensated for by insurance or otherwise;

(7) Debts ascertained to be worthless and charged off within the taxable year:

(8) A reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence;

(9) In the case of buildings, machinery, equipment, or other facilities, constructed, erected, installed, or acquired, on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war, and in the case of vessels constructed or acquired on or after such date for the transportation of articles or men contributing to the prosecution of the present war, there shall be allowed a reasonable deduction for the amortization of such part of the cost of such facilities or vessels as has been borne by the taxpayer, but not again including any amount otherwise allowed under this title or previous acts of congress as a deduction in computing net income. At any time within three years after the termination of the present war, the commissioner may, and at the request of the taxpayer shall, reexamine the return, and if he then finds as a result of an appraisal or from other evidence that the deduction originally allowed was incorrect, the taxes imposed by this title and by title III for the year or years affected shall be redetermined; and the amount of tax due upon such redetermination, if any, shall be paid upon notice and demand by the collector, or the amount of tax overpaid, if any, shall be credited or refunded to the taxpayer in accordance with the provisions of section 252;

(10) In the case of mines, oil and gas wells, other natural deposits, and timber, a reasonable allowance for depletion and for depreciation of improvements, according to the peculiar conditions in each case, based upon cost including cost of development not otherwise deducted; provided, that in the case of such properties acquired prior to March 1, 1913, the fair market value of the property (or the taxpayer's interest therein) on that date shall be taken in lieu of cost up to that date; provided further, that in the case of mines, oil and gas wells, discovered by the taxpayer, on or after March 1, 1913, and not acquired as the result of purchase of a proven tract or lease, where the fair market value of the property is materially disproportionate to the cost, the depletion allowance shall be based upon the fair market value of the property at the date of the discovery, or within 30 days thereafter; such reasonable allowance in all the above cases to be made under rules and regulations to be prescribed by the commissioner with the approval of the secretary. In the case of leases the deductions allowed by this paragraph shall be equitably apportioned between the lessor and lessee;

(11) Contributions or gifts made within the taxable year to corporations organized and operated exclusively for religious, charitable, scientific, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private stockholder or individual, or to the special fund for vocational rehabilitation authorized by section 7 of the vocational rehabilitation act, to an amount not in excess of 15 per centum of the taxpayer's net income as computed without the benefit of this paragraph. Such contributions or gifts shall be allowable as deductions only if verified under rules and regulations prescribed by the commissioner, with the approval of the secretary. In the case of a nonresident alien individual this deduction shall be allowed only as to contributions or gifts made to domestic corporations, or to such vocational rehabilitation fund;

(12) (a) At the time of filing return for the taxable year 1918 a taxpayer may file a claim in abatement based on the fact that he has sustained a substantial loss (whether or not actually realized by sale or other disposition) resulting from any material reduction (not due to temporary fluctuation) of the value of the inventory for such taxable year, or from the actual payment after the close of such taxable year of rebates in pursuance of contracts entered into during such year upon sales made during such year. In such case payment of the amount of the tax covered by such claim shall not be required until the claim is decided, but the taxpayer shall accompany his claim with a bond in double the amount of the tax covered by the claim, with sureties satisfactory to the commissioner, conditioned for the payment of any part of such tax found to be due, with interest. If any part of such claim is disallowed then the remainder of the tax due shall on notice and demand by the collector be paid by the taxpayer with interest at the rate of 1 per centum per month from the time the tax would have been due had no such claim been filed. If it is shown to the satisfaction of the commissioner that such substantial

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loss has been sustained, then in computing the tax imposed by this title the amount of such loss shall be deducted from the net income. (b) If no such claim is filed, but it is shown to the satisfaction of the commissioner that during the taxable year 1919 the taxpayer has sustained a substantial loss of the character above described then the amount of such loss shall be deducted from the net income for the taxable year 1918 and the tax imposed by this title for such year shall be redetermined accordingly. Any amount found to be due to the taxpayer upon the basis of such redetermination shall be credited or refunded to the taxpayer in accordance with the provisions of section 252.

(b) In the case of a nonresident alien individual the deductions allowed in paragraphs (1), (4), (7), (8), (9), (10), (12), and clause (c) of paragraph (3), of subdivision (a) shall be allowed only if and to the extent that they are connected with income arising from a source within the United States; and the proper apportionment and allocation of the deductions with respect to sources of income within and without the United States shall be determined under rules and regulations prescribed by the commissioner with the approval of the secretary.

ITEMS NOT DEDUCTIBLE.

Sec. 215. That in computing net income no deduction shall in any case be allowed in respect of—

- (a) Personal, living, or family expenses;
- (b) Any amount paid out for new buildings or for permanent improvements or betterments made to increase the value of any property or estate;
- (c) Any amount expended in restoring property or in making good the exhaustion thereof for which an allowance is or has been made; or
- (d) Premiums paid on any life insurance policy covering the life of any officer or employee, or of any person financially interested in any trade or business carried on by the taxpayer, when the taxpayer is directly or indirectly a beneficiary under such policy.

CREDITS ALLOWED.

Sec. 216. That for the purpose of the normal tax only there shall be allowed the following credits:

- (a) The amount received as dividends from a corporation which is taxable under this title upon its net income, and amounts received as dividends from a personal service corporation out of earnings or profits upon which income tax has been imposed by act of congress;
- (b) The amount received as interest upon obligations of the United States and bonds issued by the war finance corporation, which is included in gross income under section 213;
- (c) In the case of a single person, a personal exemption of \$1,000, or in the case of the head of a family or a married person living with husband or wife, a personal exemption of \$2,000. A husband and wife living together shall receive but one personal exemption of \$2,000 against

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their aggregate net income; and in case they make separate returns, the personal exemption of \$2,000 may be taken by either or divided between them;

(d) \$200 for each person (other than husband or wife) dependent upon and receiving his chief support from the taxpayer, if such dependent person is under eighteen years of age or is incapable of self-support because mentally or physically defective.

(e) In the case of a nonresident alien individual who is a citizen or subject of a country which imposes an income tax, the credits allowed in subdivisions (c) and (d) shall be allowed only if such country allows a similar credit to citizens of the United States not residing in such country.

NONRESIDENT ALIENS—ALLOWANCE OF DEDUCTIONS AND CREDITS.

Sec. 217. That a nonresident alien individual shall receive the benefit of the deductions and credits allowed in this title only by filing or causing to be filed with the collector a true and accurate return of his total income received from all sources corporate or otherwise in the United States, in the manner prescribed by this title, including therein all the information which the commissioner may deem necessary for the calculation of such deductions and credits; provided, that the benefit of the credits allowed in subdivisions (c) and (d) of section 216 may, in the discretion of the commissioner, and except as otherwise provided in subdivision (e) of that section, be received by filing a claim therefor with the withholding agent. In case of failure to file a return, the collector shall collect the tax on such income, and all property belonging to such nonresident alien individual shall be liable to distraint for the tax.

PARTNERSHIPS AND PERSONAL SERVICE CORPORATIONS.

Sec. 218. (a) That individuals carrying on business in partnership shall be liable for income tax only in their individual capacity. There shall be included in computing the net income of each partner his distributive share, whether distributed or not, of the net income of the partnership for the taxable year, or, if his net income for such taxable year is computed upon the basis of a period different from that upon the basis of which the net income of the partnership is computed, then his distributive share of the net income of the partnership for any accounting period of the partnership ending within the fiscal or calendar year upon the basis of which the partner's net income is computed.

The partner shall, for the purpose of the normal tax, be allowed as credits, in addition to the credits allowed to him under section 216, his proportionate share of such amounts specified in subdivisions (a) and (b) of section 216 as are received by the partnership.

(b) If a fiscal year of a partnership ends during a calendar year for which the rates of tax differ from those for the preceding calendar year, then (1) the rates for such preceding calendar year shall apply to an amount of each partner's share of such partnership net income equal to the proportion which the part of such fiscal year falling within such

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calendar year bears to the full fiscal year, and (2) the rates for the calendar year during which such fiscal year ends shall apply to the remainder.

(c) In the case of an individual member of a partnership which makes return for a fiscal year beginning in 1917 and ending in 1918, his proportionate share of any excess profits tax imposed upon the partnership under the revenue act of 1917 with respect to that part of such fiscal year falling in 1917, shall, for the purpose of determining the tax imposed by this title, be credited against that portion of the net income embraced in his personal return for the taxable year 1918 to which the rates for 1917 apply.

(d) The net income of the partnership shall be computed in the same manner and on the same basis as provided in section 212, except that the deduction provided in paragraph (11) of subdivision (a) of section 214 shall not be allowed.

(e). Personal service corporations shall not be subject to taxation under this title, but the individual stockholders thereof shall be taxed in the same manner as the members of partnerships. All the provisions of this title relating to partnerships and the members thereof shall so far as practicable apply to personal service corporations and the stockholders thereof; provided, that for the purpose of this subdivision amounts distributed by a personal service corporation during its taxable year shall be accounted for by the distributees; and any portion of the net income remaining undistributed at the close of its taxable year shall be accounted for by the stockholders of such corporation at the close of its taxable year in proportion to their respective shares.

ESTATES AND TRUSTS.

Sec. 219. (a) That the tax imposed by sections 210 and 211 shall apply to the income of estates or of any kind of property held in trust, including—

(1) Income received by estates of deceased persons during the period of administration or settlement of the estate;

(2) Income accumulated in trust for the benefit of unborn or unascertained persons or persons with contingent interests;

(3) Income held for future distribution under the terms of the will or trust; and

(4) Income which is to be distributed to the beneficiaries periodically, whether or not at regular intervals, and the income collected by a guardian of an infant to be held or distributed as the court may direct.

(b) The fiduciary shall be responsible for making the return of income for the estate or trust for which he acts. The net income of the estate or trust shall be computed in the same manner and on the same basis as provided in section 212, except that there shall also be allowed as a deduction (in lieu of the deduction authorized by paragraph (11) of subdivision (a) of section 214) any part of the gross income which, pursuant to the terms of the will or deed creating the trust, is during the taxable year paid to or permanently set aside for the United States, any state, territory, or

any political subdivision thereof, or the District of Columbia, or any corporation organized and operated exclusively for religious, charitable, scientific, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private stockholder or individual; and in cases under paragraph (4) of subdivision (a) of this section the fiduciary shall include in the return a statement of each beneficiary's distributive share of such net income, whether or not distributed before the close of the taxable year for which the return is made.

(c) In cases under paragraph (1), (2), or (3) of subdivision (a) the tax shall be imposed upon the net income of the estate or trust and shall be paid by the fiduciary, except that in determining the net income of the estate of any deceased person during the period of administration or settlement there may be deducted the amount of any income properly paid or credited to any legatee, heir or other beneficiary. In such cases the estate or trust shall, for the purpose of the normal tax, be allowed the same credits as are allowed to single persons under section 216.

(d) In cases under paragraph (4) of subdivision (a), and in the case of any income of an estate during the period of administration or settlement permitted by subdivision (c) to be deducted from the net income upon which tax is to be paid by the fiduciary, the tax shall not be paid by the fiduciary, but there shall be included in computing the net income of each beneficiary his distributive share, whether distributed or not, of the net income of the estate or trust for the taxable year, or, if his net income for such taxable year is computed upon the basis of a period different from that upon the basis of which the net income of the estate or trust is computed, then his distributive share of the net income of the estate or trust for any accounting period of such estate or trust ending within the fiscal or calendar year upon the basis of which such beneficiary's net income is computed. In such cases the beneficiary shall, for the purpose of the normal tax, be allowed as credits in addition to the credits allowed to him under section 216, his proportionate share of such amounts specified in subdivisions (a) and (b) of section 216 as are received by the estate or trust.

PROFITS OF CORPORATIONS TAXABLE TO STOCKHOLDERS.

Sec. 220. That if any corporation, however created or organized, is formed or availed of for the purpose of preventing the imposition of the surtax upon its stockholders or members through the medium of permitting its gains and profits to accumulate instead of being divided or distributed, such corporation shall not be subject to the tax imposed by section 230, but the stockholders or members thereof shall be subject to taxation under this title in the same manner as provided in subdivision (e) of section 218 in the case of stockholders of a personal service corporation, except that the tax imposed by title III shall be deducted from the net income of the corporation before the computation of the proportionate share of each stockholder or member. The fact that any corporation is a mere holding

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company, or that the gains and profits are permitted to accumulate beyond the reasonable needs of the business, shall be prima facie evidence of a purpose to escape the surtax; but the fact that the gains and profits are in any case permitted to accumulate and become surplus shall not be construed as evidence of a purpose to escape the tax in such case unless the commissioner certifies that in his opinion such accumulation is unreasonable for the purposes of the business. When requested by the commissioner, or any collector, every corporation shall forward to him a correct statement of such gains and profits and the names and addresses of the individuals or shareholders who would be entitled to the same if divided or distributed, and of the amounts that would be payable to each.

PAYMENT OF TAX AT SOURCE.

Sec. 221. (a) That all individuals, corporations and partnerships, in whatever capacity acting, including lessees or mortgagors of real or personal property, fiduciaries, employers, and all officers and employees of the United States, having the control, receipt, custody, disposal, or payment, of interest, rent, salaries, wages, premiums, annuities, compensations, remunerations, emoluments, or other fixed or determinable annual or periodical gains, profits, and income, of any nonresident alien individual (other than income received as dividends from a corporation which is taxable under this title upon its net income) shall (except in the cases provided for in subdivision (b) and except as otherwise provided in regulations prescribed by the commissioner under section 217) deduct and withhold from such annual or periodical gains, profits, and income a tax equal to 8 per centum thereof; provided, that the commissioner may authorize such tax to be deducted and withheld from the interest upon any securities the owners or which are not known to the withholding agent.

(b) In any case where bonds, mortgages, or deeds of trust, or other similar obligations of a corporation contain a contract or provision by which the obligor agrees to pay any portion of the tax imposed by this title upon the obligee, or to reimburse the obligee for any portion of the tax, or to pay the interest without deduction for any tax which the obligor may be required or permitted to pay thereon or to retain therefrom under any law of the United States, the obligor shall deduct and withhold a tax equal to 2 per centum of the interest upon such bonds, mortgages, deeds of trust, or other obligations, whether such interest is payable annually or at shorter or longer periods and whether payable to a nonresident alien individual or to an individual citizen or resident of the United States or to a partnership: *provided*, that the commissioner may authorize such tax to be deducted and withheld in the case of interest upon any such bonds, mortgages, deeds of trust or other obligations, the owners of which are not known to the withholding agent. Such deduction and withholding shall not be required in the case of a citizen or resident entitled to receive such interest, if he files with the withholding agent on or before February 1, a signed notice in writing claiming the benefit of the credits provided in

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subdivisions (c) and (d) of section 216; nor in the case of a nonresident alien individual if so provided for in regulations prescribed by the commissioner under section 217.

(c) Every individual, corporation, or partnership required to deduct and withhold any tax under this section shall make return thereof on or before March first of each year and shall on or before June 15th pay the tax to the official of the United States government authorized to receive it. Every such individual, corporation, or partnership is hereby made liable for such tax and is hereby indemnified against the claims and demands of any individual, corporation, or partnership for the amount of any payments made in accordance with the provisions of this section.

(d) Income upon which any tax is required to be withheld at the source under this section shall be included in the return of the recipient of such income, but any amount of tax so withheld shall be credited against the amount of income tax as computed in such return.

(e) If any tax required under this section to be deducted and withheld is paid by the recipient of the income, it shall not be recollected from the withholding agent; nor in cases in which the tax is so paid shall any penalty be imposed upon or collected from the recipient of the income or the withholding agent for failure to return or pay the same, unless such failure was fraudulent and for the purpose of evading payment.

CREDIT FOR TAXES

Sec. 222. (a) That the tax computed under part II of this title shall be credited with:

(1) In the case of a citizen of the United States, the amount of any income, war-profits and excess-profits taxes paid during the taxable year to any foreign country, upon income derived from sources therein, or to any possession of the United States; and

(2) In the case of a resident of the United States, the amount of any such taxes paid during the taxable year to any possession of the United States; and

(3) In the case of an alien resident of the United States who is a citizen or subject of a foreign country, the amount of any such taxes paid during the taxable year to such country, upon income derived from sources therein, if such country, in imposing such taxes, allows a similar credit to citizens of the United States residing in such country; and

(4) In the case of any such individual who is a member of a partnership or a beneficiary of an estate or trust, his proportionate share of such taxes of the partnership or the estate or trust paid during the taxable year to a foreign country or to any possession of the United States, as the case may be.

(b) If accrued taxes when paid differ from the amounts claimed as credits by the taxpayer, or if any tax paid is refunded in whole or in part, the taxpayer shall notify the commissioner who shall redetermine the

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amount of the tax due under part II of this title for the year or years affected, and the amount of tax due upon such redetermination, if any, shall be paid by the taxpayer upon notice and demand by the collector, or the amount of tax overpaid, if any, shall be credited or refunded to the taxpayer in accordance with the provisions of section 252. In the case of such a tax accrued but not paid, the commissioner as a condition precedent to the allowance of this credit may require the taxpayer to give a bond with sureties satisfactory to and to be approved by the commissioner in such penal sum as the commissioner may require, conditioned for the payment by the taxpayer of any amount of tax found due upon any such redetermination; and the bond herein prescribed shall contain such further conditions as the commissioner may require.

(c) These credits shall be allowed only if the taxpayer furnishes evidence satisfactory to the commissioner showing the amount of income derived from sources within such foreign country or such possession of the United States, and all other information necessary for the computation of such credits.

INDIVIDUAL RETURNS.

Sec. 223. That every individual having a net income for the taxable year of \$1,000 or over if single or if married and not living with husband or wife, or \$2,000 or over if married and living with husband or wife, shall make under oath a return stating specifically the items of his gross income and the deductions and credits allowed by this title. If a husband and wife living together have an aggregate net income of \$2,000 or over, each shall make such a return unless the income of each is included in a single joint return.

If the taxpayer is unable to make his own return, the return shall be made by a duly authorized agent or by the guardian or other person charged with the care of the person or property of such taxpayer.

PARTNERSHIP RETURNS.

Sec. 224. That every partnership shall make a return for each taxable year, stating specifically the items of its gross income and the deductions allowed by this title, and shall include in the return the names and addresses of the individuals who would be entitled to share in the net income if distributed and the amount of the distributive share of each individual. The return shall be sworn to by any one of the partners.

FIDUCIARY RETURNS.

Sec. 225. That every fiduciary (except receivers appointed by authority of law in possession of part only of the property of an individual) shall make under oath a return for the individual estate or trust for which he acts (1) if the net income of such individual is \$1,000 or over if single or if married and not living with husband or wife, or \$2,000 or over if married and living with husband or wife, or (2) if the net income of such estate or trust is \$1,000 or over or if any beneficiary of such estate or

trust is a nonresident alien, stating specifically the items of the gross income and the deductions and credits allowed by this title. Under such regulations as the commissioner with the approval of the secretary may prescribe, a return made by one of two or more joint fiduciaries and filed in the office of the collector of the district where such fiduciary resides shall be a sufficient compliance with the above requirement. The fiduciary shall make oath that he has sufficient knowledge of the affairs of such individual, estate or trust to enable him to make the return, and that the same is, to the best of his knowledge and belief, true and correct.

Fiduciaries required to make returns under this act shall be subject to all the provisions of this act which apply to individuals.

RETURNS WHEN ACCOUNTING PERIOD CHANGED.

Sec. 236. That if a taxpayer, with the approval of the commissioner, changes the basis of computing net income from fiscal year to calendar year a separate return shall be made for the period between the close of the last fiscal year for which return was made and the following December 31. If the change is from calendar year to fiscal year, a separate return shall be made for the period between the close of the last calendar year for which return was made and the date designated as the close of the fiscal year. If the change is from one fiscal year to another fiscal year a separate return shall be made for the period between the close of the former fiscal year and the date designated as the close of the new fiscal year. If a taxpayer making his first return for income tax keeps his accounts on the basis of a fiscal year he shall make a separate return for the period between the beginning of the calendar year in which such fiscal years ends and the end of such fiscal year.

In all of the above cases the net income shall be computed on the basis of such period for which separate return is made, and the tax shall be paid thereon at the rate for the calendar year in which such period is included; and the credits provided in subdivisions (c) and (d) of section 216 shall be reduced respectively to amounts which bear the same ratio to the full credits provided in such subdivisions as the number of months in such period bears to twelve months.

TIME AND PLACE FOR FILING RETURNS.

Sec. 227. (a) That returns shall be made on or before the fifteenth day of the third month following the close of the fiscal year, or, if the return is made on the basis of the calendar year, then the return shall be made on or before the fifteenth day of March. The commissioner may grant a reasonable extension of time for filing returns whenever in his judgment good cause exists and shall keep a record of every such extension and the reason therefor. Except in the case of taxpayers who are abroad, no such extension shall be for more than six months.

(b) Returns shall be made to the collector for the district in which is located the legal residence or principal place of business of the person

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making the return, or, if he has no legal residence or principal place of business in the United States, then to the collector at Baltimore, Maryland.

UNDERSTATEMENT IN RETURNS.

Sec. 228. That if the collector or deputy collector has reason to believe that the amount of any income returned is understated, he shall give due notice to the taxpayer making the return to show cause why the amount of the return should not be increased, and upon proof of the amount understated, may increase the same accordingly. Such taxpayer may furnish sworn testimony to prove any relevant facts and if dissatisfied with the decision of the collector may appeal to the commissioner for his decision, under such rules of procedure as may be prescribed by the commissioner with the approval of the secretary.

PART III—CORPORATIONS.

TAX ON CORPORATIONS.

Sec. 230. (a) That, in lieu of the taxes imposed by section 10 of the revenue act of 1916, as amended by the revenue act of 1917, and by section 4 of the revenue act of 1917, there shall be levied, collected, and paid for each taxable year upon the net income of every corporation a tax at the following rates:

(1) For the calendar year 1918, 12 per centum of the amount of the net income in excess of the credits provided in section 236; and

(2) For each calendar year thereafter, 10 per centum of such excess amount.

(b) For the purposes of the act approved March 21, 1918, entitled "An act to provide for the operation of transportation systems while under federal control, for the just compensation of their owners and for other purposes," five-sixths of the tax imposed by paragraph (1) of subdivision (a) and four-fifths of the tax imposed by paragraph (2) of subdivision (a) shall be treated as levied by an act in amendment of title I of the revenue act of 1917.

CONDITIONAL AND OTHER EXEMPTIONS.

Sec. 231. That the following organizations shall be exempt from taxation under this title—

(1) Labor, agricultural, or horticultural organizations;

(2) Mutual savings banks not having a capital stock represented by shares;

(3) Fraternal beneficiary societies, orders, or associations, (a) operating under the lodge system or for the exclusive benefit of the members of a fraternity itself operating under the lodge system, and (b) providing for the payment of life, sick, accident, or other benefits to the members of such society, order, or association or their dependents;

(4) Domestic building and loan associations and cooperative banks without capital stock organized and operated for mutual purposes and without profit;

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(5) Cemetery companies owned and operated exclusively for the benefit of their members;

(6) Corporations organized and operated exclusively for religious, charitable, scientific or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private stockholder or individual;

(7) Business leagues, chambers of commerce, or boards of trade, not organized for profit and no part of the net earnings of which inures to the benefit of any private stockholder or individual;

(8) Civic leagues or organizations not organized for profit but operated exclusively for the promotion of social welfare;

(9) Clubs organized and operated exclusively for pleasure, recreation, and other nonprofitable purposes, no part of the net earnings of which inures to the benefit of any private stockholder or member;

(10) Farmers' or other mutual hail, cyclone, or fire insurance companies, mutual ditch or irrigation companies, mutual or cooperative telephone companies, or like organizations of a purely local character, the income of which consists solely of assessments, dues, and fees collected from members for the sole purpose of meeting expenses;

(11) Farmers', fruit growers', or like associations, organized and operated as sales agents for the purpose of marketing the products of members and turning back to them the proceeds of sales, less the necessary selling expenses, on the basis of the quantity of produce furnished by them;

(12) Corporations organized for the exclusive purpose of holding title to property, collecting income therefrom, and turning over the entire amount thereof, less expenses, to an organization which itself is exempt from the tax imposed by this title;

(13) Federal land banks and national farm-loan associations as provided in section 26 of the act approved July 17, 1916, entitled "An act to provide capital for agricultural development, to create standard forms of investment based upon farm mortgage, to equalize rates of interest upon farm loans, to furnish a market for United States bonds, to create government depositaries and financial agents for the United States, and for other purposes";

(14) Personal service corporations.

NET INCOME DEFINED.

Sec. 232. That in the case of a corporation subject to the tax imposed by section 230 the term "net income" means the gross income as defined in section 233 less the deductions allowed by section 234, and the net income shall be computed on the same basis as is provided in subdivision (b) of section 212 or in section 226.

GROSS INCOME DEFINED.

Sec. 233. (a) That in the case of a corporation subject to the tax imposed by section 230 the term "gross income" means the gross income as defined in section 213, except that:

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(1) In the case of life insurance companies there shall not be included in gross income such portion of any actual premium received from any individual policyholder as is paid back or credited to or treated as an abatement of premium of such policyholder within the taxable year.

(2) Mutual marine insurance companies shall include in gross income the gross premiums collected and received by them less amounts paid for reinsurance.

(b) In the case of a foreign corporation gross income includes only the gross income from sources within the United States, including the interest on bonds, notes, or other interest-bearing obligations, of residents, corporate or otherwise, dividends from resident corporations, and including all amounts received (although paid under a contract for the sale of goods or otherwise) representing profits on the manufacture and disposition of goods within the United States.

DEDUCTIONS ALLOWED.

Sec. 234. (a) That in computing the net income of a corporation subject to the tax imposed by section 230 there shall be allowed as deductions:

(1) All the ordinary and necessary expenses paid or incurred during the taxable year in carrying on any trade or business, including a reasonable allowance for salaries or other compensation for personal services actually rendered, and including rentals or other payments required to be made as a condition to the continued use or possession of property to which the corporation has not taken or is not taking title, or in which it has no equity;

(2) All interest paid or accrued within the taxable year on its indebtedness, except on indebtedness incurred or continued to purchase or carry obligations or securities (other than obligations of the United States issued after September 24, 1917) the interest upon which is wholly exempt from taxation under this title as income to the taxpayer, or, in the case of a foreign corporation, the proportion of such interest which the amount of its gross income from sources within the United States bears to the amount of its gross income from all sources within and without the United States;

(3) Taxes paid or accrued within the taxable year imposed (a) by the authority of the United States, except income, war profits and excess-profits taxes; or (b) by the authority of any of its possessions, except the amount of income, war profits and excess-profits taxes allowed as a credit under section 238; or (c) by the authority of any state or territory, or any county, school district, municipality, or other taxing subdivision of any state or territory, not including those assessed against local benefits of a kind tending to increase the value of the property assessed; or (d) in the case of a domestic corporation, by the authority of any foreign country, except the amount of income, war-profits and excess-profits taxes allowed as a credit under section 238; or (e) in the case of a foreign corporation, by the authority of any foreign country (except income, war-profits and excess-profits taxes, and taxes assessed against

local benefits of a kind tending to increase the value of the property assessed), upon the property or business: *provided*, that in the case of obligors specified in subdivision (b) of section 221 no deduction for the payment of the tax imposed by this title or any other tax paid pursuant to the contract or provision referred to in that subdivision, shall be allowed;

(4) Losses sustained during the taxable year and not compensated for by insurance or otherwise;

(5) Debts ascertained to be worthless and charged off within the taxable year;

(6) Amounts received as dividends from a corporation which is taxable under this title upon its net income, and amounts received as dividends from a personal service corporation out of earnings or profits upon which income tax has been imposed by act of congress;

(7) A reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence;

(8) In the case of buildings, machinery, equipment, or other facilities, constructed, erected, installed, or acquired, on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war, and in the case of vessels constructed or acquired on or after such date for the transportation of articles or men contributing to the prosecution of the present war, there shall be allowed a reasonable deduction for the amortization of such part of the cost of such facilities or vessels as has been borne by the taxpayer, but not again including any amount otherwise allowed under this title or previous acts of congress as a deduction in computing net income. At any time within three years after the termination of the present war the commissioner may, and at the request of the taxpayer shall, reexamine the return, and if he then finds as a result of an appraisal or from other evidence that the deduction originally allowed was incorrect, the taxes imposed by this title and by title III for the year or years affected shall be redetermined; and the amount of tax due upon such redetermination, if any, shall be paid upon notice and demand by the collector, or the amount of tax overpaid, if any, shall be credited or refunded to the taxpayer in accordance with the provisions of section 252.

(9) In the case of mines, oil and gas wells, other natural deposits, and timber, a reasonable allowance for depletion and for depreciation of improvements, according to the peculiar conditions in each case, based upon cost including cost of development not otherwise deducted: *provided*, that in the case of such properties acquired prior to March 1, 1913, the fair market value of the property (or the taxpayer's interest therein) on that date shall be taken in lieu of cost up to that date: *provided further*, that in the case of mines, oil and gas wells, discovered by the taxpayer, on or after March 1, 1913, and not acquired as the result of purchase of a proven tract or lease, where the fair market value of the property is materially disproportionate to the cost, the depletion allowance shall be based upon

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the fair market value of the property at the date of the discovery, or within 30 days thereafter; such reasonable allowance in all the above cases to be made under rules and regulations to be prescribed by the commissioner with the approval of the secretary. In the case of leases the deductions allowed by this paragraph shall be equitably apportioned between the lessor and lessee:

(10) In the case of insurance companies, in addition to the above: (a) the net addition required by law to be made within the taxable year to reserve funds (including in the case of assessment insurance companies the actual deposit of sums with state or territorial officers pursuant to law as additions to guarantee or reserve funds), and (b) the sums other than dividends paid within the taxable year on policy and annuity contracts;

(11) In the case of corporations issuing policies covering life, health, and accident insurance combined in one policy issued on the weekly premium payment plan continuing for life and not subject to cancellation, in addition to the above, such portion of the net addition (not required by law) made within the taxable year to reserve funds as the commissioner finds to be required for the protection of the holders of such policies only;

(12) In the case of mutual marine insurance companies, there shall be allowed, in addition to the deductions allowed in paragraphs (1) to (10), inclusive, amounts repaid to policyholders on account of premiums previously paid by them, and interest paid upon such amounts between the ascertainment and the payment thereof;

(13) In the case of mutual insurance companies (other than mutual life or mutual marine insurance companies) requiring their members to make premium deposits to provide for losses and expenses, there shall be allowed, in addition to the deductions allowed in paragraphs (1) to (10), inclusive, (unless otherwise allowed under such paragraphs) the amount of premium deposits returned to their policyholders and the amount of premium deposits retained for the payment of losses, expenses, and reinsurance reserves;

(14) (a) At the time of filing return for the taxable year 1918 a taxpayer may file a claim in abatement based on the fact that he has sustained a substantial loss (whether or not actually realized by sale or other disposition) resulting from any material reduction (not due to temporary fluctuation) of the value of the inventory for such taxable year, or from the actual payment after the close of such taxable year of rebates in pursuance of contracts entered into during such year upon sales made during such year. In such case payment of the amount of the tax covered by such claim shall not be required until the claim is decided, but the taxpayer shall accompany his claim with a bond in double the amount of the tax covered by the claim, with sureties satisfactory to the commissioner, conditioned for the payment of any part of such tax found to be due, with interest. If any part of such claim is disallowed then the remainder of the tax due shall on notice and demand by the collector be paid by the taxpayer with interest at the rate of 1 per centum per month

from the time the tax would have been due had no such claim been filed. If it is shown to the satisfaction of the commissioner that such substantial loss has been sustained, then in computing the taxes imposed by this title and by title III the amount of such loss shall be deducted from the net income. (b) If no such claim is filed, but it is shown to the satisfaction of the commissioner that during the taxable year 1919 the taxpayer has sustained a substantial loss of the character above described then the amount of such loss shall be deducted from the net income for the taxable year 1918 and the taxes imposed by this title and by title III for such year shall be redetermined accordingly. Any amount found to be due to the taxpayer upon the basis of such redetermination shall be credited or refunded to the taxpayer in accordance with the provisions of section 252.

(b) In the case of a foreign corporation the deductions allowed in subdivision (a), except those allowed in paragraph (2) and in clauses (a), (b), and (c) of paragraph (3), shall be allowed only if and to the extent that they are connected with income arising from a source within the United States; and the proper apportionment and allocation of the deductions with respect to sources of income within and without the United States shall be determined under rules and regulations prescribed by the commissioner with the approval of the secretary.

ITEMS NOT DEDUCTIBLE.

Sec. 235. That in computing net income no deduction shall in any case be allowed in respect of any of the items specified in section 215.

CREDITS ALLOWED.

Sec. 236. That for the purpose only of the tax imposed by section 230 there shall be allowed the following credits:

(a) The amount received as interest upon obligations of the United States and bonds issued by the war finance corporation, which is included in gross income under section 233;

(b) The amount of any taxes imposed by title III for the same taxable year: *provided*, that in the case of a corporation which makes return for a fiscal year beginning in 1917 and ending in 1918, in computing the tax as provided in subdivision (a) of section 205, the tax computed for the entire period under title II of the revenue act of 1917 shall be credited against the net income computed for the entire period under title I of the revenue act of 1916 as amended by the revenue act of 1917 and under title I of the revenue act of 1917, and the tax computed for the entire period under title III of this act at the rates prescribed for the calendar year 1918 shall be credited against the net income computed for the entire period under this title; and

(c) In the case of a domestic corporation, \$2,000.

PAYMENT OF TAX AT SOURCE.

Sec. 237. That in the case of foreign corporations subject to taxation under this title not engaged in trade or business within the United States and not having any office or place of business therein, there shall be

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deducted and withheld at the source in the same manner and upon the same items of income as is provided in section 221 a tax equal to 10 per centum thereof, and such tax shall be returned and paid in the same manner and subject to the same conditions as provided in that section: *provided*, that in the case of interest described in subdivision (b) of that section the deduction and withholding shall be at the rate of 2 per centum.

CREDIT FOR TAXES.

Sec. 238. (a) That in the case of a domestic corporation the total taxes imposed for the taxable year by this title and by title III shall be credited with the amount of any income, war-profits and excess-profits taxes paid during the taxable year to any foreign country, upon income derived from sources therein, or to any possession of the United States.

If accrued taxes when paid differ from the amounts claimed as credits by the corporation, or if any tax paid is refunded in whole or in part, the corporation shall at once notify the commissioner who shall redetermine the amount of the taxes due under this title and under title III for the year or years affected, and the amount of taxes due upon such redetermination, if any, shall be paid by the corporation upon notice and demand by the collector, or the amount of taxes overpaid, if any, shall be credited or refunded to the corporation in accordance with the provisions of section 252. In the case of such a tax accrued but not paid, the commissioner as a condition precedent to the allowance of this credit may require the corporation to give a bond with sureties satisfactory to and to be approved by him in such penal sum as he may require, conditioned for the payment by the taxpayer of any amount of taxes found due upon any such redetermination; and the bond herein prescribed shall contain such further conditions as the commissioner may require.

(b) This credit shall be allowed only if the taxpayer furnishes evidence satisfactory to the commissioner showing the amount of income derived from sources within such foreign country or such possession of the United States, as the case may be, and all other information necessary for the computation of such credit.

(c) If a domestic corporation makes a return for a fiscal year beginning in 1917 and ending in 1918, only that proportion of this credit shall be allowed which the part of such period within the calendar year 1918 bears to the entire period.

CORPORATION RETURNS.

Sec. 239. That every corporation subject to taxation under this title and every personal service corporation shall make a return, stating specifically the items of its gross income and the deductions and credits allowed by this title. The return shall be sworn to by the president, vice-president, or other principal officer and by the treasurer or assistant treasurer. If any foreign corporation has no office or place of business in the United States but has an agent in the United States, the return shall be made by the agent. In cases where receivers, trustees in bankruptcy,

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or assignees are operating the property or business of corporations, such receivers, trustees, or assignees shall make returns for such corporations in the same manner and form as corporations are required to make returns. Any tax due on the basis of such returns made by receivers, trustees, or assignees shall be collected in the same manner as if collected from the corporations of whose business or property they have custody and control.

Returns made under this section shall be subject to the provisions of sections 226 and 228.

When return is made under section 226 the credit provided in subdivision (c) of section 236 shall be reduced to an amount which bears the same ratio to the full credit therein provided as the number of months in the period for which such return is made bears to twelve months.

CONSOLIDATED RETURNS.

Sec. 240. (a) That corporations which are affiliated within the meaning of this section shall, under regulations to be prescribed by the commissioner with the approval of the secretary, make a consolidated return of net income and invested capital for the purposes of this title and title III, and the taxes thereunder shall be computed and determined upon the basis of such return: *provided*, that there shall be taken out of such consolidated net income and invested capital, the net income and invested capital of any such affiliated corporation organized after August 1, 1914, and not successor to a then existing business, 50 per centum or more of whose gross income consists of gains, profits, commissions, or other income, derived from a government contract or contracts made between April 6, 1917, and November 11, 1918, both dates inclusive. In such case the corporation so taken out shall be separately assessed on the basis of its own invested capital and net income and the remainder of such affiliated group shall be assessed on the basis of the remaining consolidated invested capital and net income.

In any case in which a tax is assessed upon the basis of a consolidated return, the total tax shall be computed in the first instance as a unit and shall then be assessed upon the respective affiliated corporations in such proportions as may be agreed upon among them, or, in the absence of any such agreement, then on the basis of the net income properly assignable to each. There shall be allowed in computing the income tax only one specific credit of \$2,000 (as provided in section 236); in computing the war-profits credit (as provided in section 311) only one specific exemption of \$3,000; and in computing the excess-profits credit (as provided in section 312) only one specific exemption of \$3,000.

(b) For the purpose of this section two or more domestic corporations shall be deemed to be affiliated (1) if one corporation owns directly or controls through closely affiliated interests or by a nominee or nominees substantially all the stock of the other or others, or (2) if substantially all the stock of two or more corporations is owned or controlled by the same interests.

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(c) For the purposes of section 238 a domestic corporation which owns a majority of the voting stock of a foreign corporation shall be deemed to have paid the same proportion of any income, war-profits and excess-profits taxes paid (but not including taxes accrued) by such foreign corporation during the taxable year to any foreign country or to any possession of the United States upon income derived from sources without the United States, which the amount of any dividends (not deductible under section 234) received by such domestic corporation from such foreign corporation during the taxable year bears to the total taxable income of such foreign corporation upon or with respect to which such taxes were paid: *provided*, that in no such case shall the amount of the credit for such taxes exceed the amount of such dividends (not deductible under section 234) received by such domestic corporation during the taxable year.

TIME AND PLACE FOR FILING RETURNS.

Sec. 241. (a) That returns of corporations shall be made at the same time as is provided in subdivision (a) of section 227.

(b) Returns shall be made to the collector of the district in which is located the principal place of business or principal office or agency of the corporation, or, if it has no principal place of business or principal office or agency in the United States, then to the collector at Baltimore, Maryland.

PART IV.—ADMINISTRATIVE PROVISIONS

PAYMENT OF TAXES

Sec. 250. (a) That except as otherwise provided in this section and sections 221 and 237 the tax shall be paid in four installments, each consisting of one-fourth of the total amount of the tax. The first installment shall be paid at the time fixed by law for filing the return, and the second installment shall be paid on the fifteenth day of the third month, the third installment on the fifteenth day of the sixth month, and the fourth installment on the fifteenth day of the ninth month, after the time fixed by law for filing the return. Where an extension of time for filing a return is granted the time for payment of the first installment shall be postponed until the date of the expiration of the period of the extension, but the time for payment of the other installments shall not be postponed unless the commissioner so provides in granting the extension. In any case in which the time for the payment of any installment is at the request of the taxpayer thus postponed, there shall be added as part of such installment interest thereon at the rate of $\frac{1}{2}$ of 1 per centum per month from the time it would have been due if no extension had been granted, until paid. If any installment is not paid when due, the whole amount of the tax unpaid shall become due and payable upon notice and demand by the collector.

The tax may at the option of the taxpayer be paid in a single payment instead of in installments, in which case the total amount shall be paid

on or before the time fixed by law for filing the return, or, where an extension of time for filing the return has been granted, on or before the expiration of the period of such extension.

(b) As soon as practicable after the return is filed, the commissioner shall examine it. If it then appears that the correct amount of the tax is greater or less than that shown in the return, the installments shall be recomputed. If the amount already paid exceeds that which should have been paid on the basis of the installments as recomputed, the excess so paid shall be credited against the subsequent installments; and if the amount already paid exceeds the correct amount of the tax, the excess shall be credited or refunded to the taxpayer in accordance with the provisions of section 252.

If the amount already paid is less than that which should have been paid, the difference shall, to the extent not covered by any credits then due to the taxpayer under section 252, be paid upon notice and demand by the collector. In such case if the return is made in good faith and the understatement of the amount in the return is not due to any fault of the taxpayer, there shall be no penalty because of such understatement. If the understatement is due to negligence on the part of the taxpayer, but without intent to defraud, there shall be added as part of the tax 5 per centum of the total amount of the deficiency, plus interest at the rate of 1 per centum per month on the amount of the deficiency of each installment from the time the installment was due.

If the understatement is false or fraudulent with intent to evade the tax, then, in lieu of the penalty provided by section 3176 of the *Revised Statutes*, as amended, for false or fraudulent returns wilfully made, but in addition to other penalties provided by law for false or fraudulent returns, there shall be added as part of the tax 50 per centum of the amount of the deficiency.

(c) If the return is made pursuant to section 3176 of the *Revised Statutes* as amended, the amount of tax determined to be due under such return shall be paid upon notice and demand by the collector.

(d) Except in the case of false or fraudulent returns with intent to evade the tax, the amount of tax due under any return shall be determined and assessed by the commissioner within five years after the return was due or was made, and no suit or proceeding for the collection of any tax shall be begun after the expiration of five years after the date when the return was due or was made. In the case of such false or fraudulent returns, the amount of tax due may be determined at any time after the return is filed, and the tax may be collected at any time after it becomes due.

(e) If any tax remains unpaid after the date when it is due, and for ten days after notice and demand by the collector, then, except in case of estates of insane, deceased, or insolvent persons, there shall be added as part of the tax the sum of 5 per centum on the amount due but unpaid, plus interest at the rate of 1 per centum per month upon such amount from the time it became due: *provided*, that as to any such amount which

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is the subject of a bona fide claim for abatement such sum of 5 per centum shall not be added and the interest from the time the amount was due until the claim is decided shall be at the rate of $\frac{1}{2}$ of 1 per centum per month.

In the case of the first installment provided for in subdivision (a) the instructions printed on the return shall be deemed sufficient notice of the date when the tax is due and sufficient demand, and the taxpayer's computation of the tax on the return shall be deemed sufficient notice of the amount due.

(f) In any case in which in order to enforce payment of a tax it is necessary for a collector to cause a warrant of distraint to be served, there shall also be added as part of the tax the sum of \$5.

(g) If the commissioner finds that a taxpayer designs quickly to depart from the United States or to remove his property therefrom, or to conceal himself or his property therein, or to do any other act tending to prejudice or to render wholly or partly ineffectual proceedings to collect the tax for the taxable year then last past or the taxable year then current unless such proceedings be brought without delay, the commissioner shall declare the taxable period for such taxpayer terminated at the end of the calendar month then last past and shall cause notice of such finding and declaration to be given the taxpayer, together with a demand for immediate payment of the tax for the taxable period so declared terminated and of the tax for the preceding taxable year or so much of said tax as is unpaid, whether or not the time otherwise allowed by law for filing return and paying the tax has expired; and such taxes shall thereupon become immediately due and payable. In any action or suit brought to enforce payment of taxes made due and payable by virtue of the provisions of this subdivision the finding of the commissioner, made as herein provided, whether made after notice to the taxpayer or not, shall be for all purposes presumptive evidence of the taxpayer's design. A taxpayer who is not in default in making any return or paying income, war-profits, or excess-profits tax under any act of congress may furnish to the United States, under regulations to be prescribed by the commissioner with the approval of the secretary, security approved by the commissioner that he will duly make the return next thereafter required to be filed and pay the tax next thereafter required to be paid. The commissioner may approve and accept in like manner security for return and payment of taxes made due and payable by virtue of the provisions of this subdivision, provided the taxpayer has paid in full all other income, war profits, or excess profits taxes due from him under any act of congress. If security is approved and accepted pursuant to the provisions of this subdivision and such further or other security with respect to the tax or taxes covered thereby is given as the commissioner shall from time to time find necessary and require, payment of such taxes shall not be enforced by any proceedings under the provisions of this subdivision prior to the expiration of the time otherwise allowed for paying such respective taxes.

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RECEIPTS FOR TAXES.

Sec. 251. That every collector to whom any payment of any tax is made under the provisions of this title shall upon request give to the person making such payment a full written or printed receipt, stating the amount paid and the particular account for which such payment was made; and whenever any debtor pays taxes on account of payments made or to be made by him to separate creditors the collector shall, if requested by such debtor, give a separate receipt for the tax paid on account of each creditor in such form that the debtor can conveniently produce such receipts separately to his several creditors in satisfaction of their respective demands up to the amounts stated in the receipts; and such receipt shall be sufficient evidence in favor of such debtor to justify him in withholding from his next payment to his creditor the amount therein stated; but the creditor may, upon giving to his debtor a full written receipt acknowledging the payment to him of any sum actually paid and accepting the amount of tax paid as aforesaid (specifying the same) as a further satisfaction of the debt to that amount, require the surrender to him of such collector's receipt.

REFUNDS.

Sec. 252. That if, upon examination of any return of income made pursuant to this act, the act of August 5, 1909, entitled "An act to provide revenue, equalize duties, and encourage the industries of the United States; and for other purposes," the act of October 3, 1913, entitled "An act to reduce tariff duties and to provide revenue for the government, and for other purposes," the revenue act of 1916, as amended, or the revenue act of 1917, it appears that an amount of income, war-profits or excess-profits tax has been paid in excess of that properly due, then, notwithstanding the provisions of section 3228 of the *Revised Statutes*, the amount of the excess shall be credited against any income, war-profits or excess-profits taxes, or installment thereof, then due from the taxpayer under any other return, and any balance of such excess shall be immediately refunded to the taxpayer: provided, that no such credit or refund shall be allowed or made after five years from the date when the return was due, unless before the expiration of such five years a claim therefor is filed by the taxpayer.

PENALTIES.

Sec. 253. That any individual, corporation, or partnership required under this title to pay or collect any tax, to make a return or to supply information, who fails to pay or collect such tax, to make such return, or to supply such information at the time or times required under this title, shall be liable to a penalty of not more than \$1,000. Any individual, corporation, or partnership, or any officer or employee of any corporation or member or employee of a partnership, who willfully refuses to pay or collect such tax, to make such return, or to supply such information at the time or times required under this title, or who willfully attempts in any manner to defeat or evade the tax imposed by this title, shall be guilty

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of a misdemeanor and shall be fined not more than \$10,000 or imprisoned for not more than one year, or both, together with the costs of prosecution.

RETURNS OF PAYMENTS OF DIVIDENDS.

Sec. 254. That every corporation subject to the tax imposed by this title and every personal service corporation shall, when required by the commissioner, render a correct return duly verified under oath, of its payments of dividends, stating the name and address of each stockholder, the number of shares owned by him, and the amount of dividends paid to him.

RETURNS OF BROKERS.

Sec. 255. That every individual, corporation, or partnership doing business as a broker shall, when required by the commissioner, render a correct return duly verified under oath, under such rules and regulations as the commissioner, with the approval of the secretary, may prescribe, showing the names of customers for whom such individual, corporation, or partnership has transacted any business, with such details as to the profits, losses, or other information which the commissioner may require, as to each of such customers, as will enable the commissioner to determine whether all income tax due on profits or gains of such customers has been paid.

INFORMATION AT SOURCE.

Sec. 256. That all individuals, corporations, and partnerships, in whatever capacity acting, including lessees or mortgagors of real or personal property, fiduciaries, and employers, making payment to another individual, corporation, or partnership, of interest, rent, salaries, wages, premiums, annuities, compensations, remunerations, emoluments, or other fixed, or determinable gains, profits, and income (other than payments described in sections 254 and 255), of \$1,000 or more in any taxable year, or, in the case of such payments made by the United States, the officers or employees of the United States having information as to such payments and required to make returns in regard thereto by the regulations hereinafter provided for, shall render a true and accurate return to the commissioner, under such regulations and in such form and manner and to such extent as may be prescribed by him with the approval of the secretary, setting forth the amount of such gains, profits, and income, and the name and address of the recipient of such payment.

Such returns may be required, regardless of amounts, (1) in the case of payments of interest upon bonds, mortgages, deeds of trust, or other similar obligations of corporations, and (2) in the case of collections of items (not payable in the United States) of interest upon the bonds of foreign countries and interest upon the bonds of and dividends from foreign corporations by individuals, corporations, or partnerships, undertaking as a matter of business or for profit the collection of foreign payments of such interest or dividends by means of coupons, checks, or bills of exchange.

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When necessary to make effective the provisions of this section the name and address of the recipient of income shall be furnished upon demand of the individual, corporation, or partnership paying the income.

The provisions of this section shall apply to the calendar year 1918 and each calendar year thereafter, but shall not apply to the payment of interest on obligations of the United States.

RETURNS TO BE PUBLIC RECORDS.

Sec. 257. That returns upon which the tax has been determined by the commissioner shall constitute public records; but they shall be open to inspection only upon order of the president and under rules and regulations prescribed by the secretary and approved by the president: provided, that the proper officers of any state imposing an income tax may, upon the request of the governor thereof, have access to the returns of any corporation, or to an abstract thereof showing the name and income of the corporation, at such times and in such manner as the secretary may prescribe: *provided further*, that all bona fide stockholders of record owning 1 per centum or more of the outstanding stock of any corporation shall, upon making request of the commissioner, be allowed to examine the annual income returns of such corporation and of its subsidiaries. Any stockholder who pursuant to the provisions of this section is allowed to examine the return of any corporation, and who makes known in any manner whatever not provided by law the amount or source of income, profits, losses, expenditures, or any particular thereof, set forth or disclosed in any such return, shall be guilty of a misdemeanor and be punished by a fine not exceeding \$1,000, or by imprisonment not exceeding one year, or both.

The commissioner shall as soon as practicable in each year cause to be prepared and made available to public inspection in such manner as he may determine, in the office of the collector in each internal-revenue district and in such other places as he may determine, lists containing the names and the post-office addresses of all individuals making income-tax returns in such district.

PUBLICATION OF STATISTICS.

Sec. 258. That the commissioner, with the approval of the secretary, shall prepare and publish annually statistics reasonably available with respect to the operation of the income, war-profits and excess-profits tax laws, including classifications of taxpayers and of income, the amounts allowed as deductions, exemptions, and credits, and any other facts deemed pertinent and valuable.

COLLECTION OF FOREIGN ITEMS.

Sec. 259. That all individuals, corporations, or partnerships undertaking as a matter of business or for profit the collection of foreign payments of interest or dividends by means of coupons, checks, or bills of exchange shall obtain a license from the commissioner and shall be subject to such regulations enabling the government to obtain the information re-

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quired under this title as the commissioner, with the approval of the secretary, shall prescribe; and whoever knowingly undertakes to collect such payments without having obtained a license therefor, or without complying with such regulations, shall be guilty of a misdemeanor and shall be fined not more than \$5,000, or imprisoned for not more than one year, or both.

CITIZENS OF UNITED STATES POSSESSIONS.

Sec. 260. That any individual who is a citizen of any possession of the United States (but not otherwise a citizen of the United States) and who is not a resident of the United States, shall be subject to taxation under this title only as to income derived from sources within the United States, and in such case the tax shall be computed and paid in the same manner and subject to the same conditions as in the case of other persons who are taxable only as to income derived from such sources.

PORTO RICO AND PHILIPPINE ISLANDS.

Sec. 261. That in Porto Rico and the Philippine Islands the income tax shall be levied, assessed, collected, and paid in accordance with the provisions of the revenue act of 1916 as amended.

Returns shall be made and taxes shall be paid under title I of such act in Porto Rico or the Philippine Islands, as the case may be, by (1) every individual who is a citizen or resident of Porto Rico or the Philippine Islands or derives income from sources therein, and (2) every corporation created or organized in Porto Rico or the Philippine Islands or deriving income from sources therein. An individual who is neither a citizen nor a resident of Porto Rico or the Philippine Islands but derives income from sources therein, shall be taxed in Porto Rico or the Philippine Islands as a nonresident alien individual, and a corporation created or organized outside Porto Rico or the Philippine Islands and deriving income from sources therein shall be taxed in Porto Rico or the Philippine Islands as a foreign corporation. For the purposes of section 216 and of paragraph (6) of subdivision (a) of section 234 a tax imposed in Porto Rico or the Philippine Islands upon the net income of a corporation shall not be deemed to be a tax under this title.

The Porto Rican or Philippine legislature shall have power by due enactment to amend, alter, modify or repeal the income tax laws in force in Porto Rico or the Philippine Islands, respectively.

TITLE III.—WAR-PROFITS AND EXCESS-PROFITS TAX.

PART I.—GENERAL DEFINITIONS.

Sec. 300. That when used in this title the terms "taxable year," "fiscal year," "personal service corporation," "paid or accrued," and "dividends" shall have the same meaning as provided for the purposes of income tax in sections 200 and 201. The first taxable year for the purposes of this title shall be the same as the first taxable year for the purposes of the income tax under title II.

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PART II.—IMPOSITION OF TAX.

Sec. 301. (a) That in lieu of the tax imposed by title II of the revenue act of 1917, but in addition to the other taxes imposed by this act, there shall be levied, collected, and paid for the taxable year 1918 upon the net income of every corporation a tax equal to the sum of the following:

FIRST BRACKET.

30 per centum of the amount of the net income in excess of the excess-profits credit (determined under section 312) and not in excess of 20 per centum of the invested capital;

SECOND BRACKET.

65 per centum of the amount of the net income in excess of 20 per centum of the invested capital;

THIRD BRACKET.

The sum, if any, by which 80 per centum of the amount of the net income in excess of the war-profits credit (determined under section 311) exceeds the amount of the tax computed under the first and second brackets.

(b) For the taxable year 1919 and each taxable year thereafter there shall be levied, collected, and paid upon the net income of every corporation (except corporations taxable under subdivision (c) of this section) a tax equal to the sum of the following:

FIRST BRACKET.

20 per centum of the amount of the net income in excess of the excess-profits credit (determined under section 312) and not in excess of 20 per centum of the invested capital;

SECOND BRACKET.

40 per centum of the amount of the net income in excess of 20 per centum of the invested capital.

(c) For the taxable year 1919 and each taxable year thereafter there shall be levied, collected, and paid upon the net income of every corporation which derives in such year a net income of more than \$10,000 from any government contract or contracts made between April 6, 1917, and November 11, 1918, both dates inclusive, a tax equal to the sum of the following:

(1) Such a portion of a tax computed at the rates specified in subdivision (a) as the part of the net income attributable to such government contract or contracts bears to the entire net income. In computing such tax the excess-profits credit and the war-profits credit applicable to the taxable year shall be used;

(2) Such a portion of a tax computed at the rates specified in subdivision (b) as the part of the net income not attributable to such government contract or contracts bears to the entire net income.

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For the purpose of determining the part of the net income attributable to such government contract or contracts, the proper apportionment and allocation of the deductions with respect to gross income derived from such government contract or contracts and from other sources, respectively, shall be determined under rules and regulations prescribed by the commissioner, with the approval of the secretary.

(d) In any case where the full amount of the excess-profits credit is not allowed under the first bracket of subdivision (a) or (b), by reason of the fact that such credit is in excess of 20 per centum of the invested capital, the part not so allowed shall be deducted from the amount in the second bracket.

(e) For the purposes of the act approved March 21, 1918, entitled "An act to provide for the operation of transportation systems while under federal control, for the just compensation of their owners and for other purposes," the tax imposed by this title shall be treated as levied by an act in amendment of title II of the revenue act of 1917.

Sec. 302. That the tax imposed by subdivision (a) of section 301 shall in no case be more than 30 per centum of the amount of the net income in excess of \$3,000 and not in excess of \$20,000, plus 80 per centum of the amount of the net income in excess of \$20,000; the tax imposed by subdivision (b) of section 301 shall in no case be more than 20 per centum of the amount of the net income in excess of \$3,000 and not in excess of \$20,000, plus 40 per centum of the amount of the net income in excess of \$20,000; and the above limitation shall apply to the taxes computed under subdivisions (a) and (b) of section 301, respectively, when used in subdivision (c) of that section. Nothing in this section shall be construed in such manner as to increase the tax imposed by section 301.

Sec. 303. That if part of the net income of a corporation is derived (1) from a trade or business (or a branch of a trade or business) in which the employment of capital is necessary, and (2) a part (constituting not less than 30 per centum of its total net income) is derived from a separate trade or business (or a distinctly separate branch of the trade or business) which if constituting the sole trade or business would bring it within the class of "personal service corporations," then (under regulations prescribed by the commissioner with the approval of the secretary) the tax upon the first part of such net income shall be separately computed (allowing in such computation only the same proportionate part of the credits authorized in sections 311 and 312), and the tax upon the second part shall be the same percentage thereof as the tax so computed upon the first part is of such first part: *provided*, that the tax upon such second part shall in no case be less than 20 per centum thereof, unless the tax upon the entire net income, if computed without benefit of this section, would constitute less than 20 per centum of such entire net income, in which event the tax shall be determined upon the entire net income, without reference to this section, as other taxes are determined under this title. The total tax computed under this section shall be subject to the limitations provided in section 302.

Sec. 304. (a) That the corporations enumerated in section 231 shall, to the extent that they are exempt from income tax under title II, be exempt from taxation under this title.

(b) Any corporation whose net income for the taxable year is less than \$3,000 shall be exempt from taxation under this title.

(d) [c?] In the case of any corporation engaged in the mining of gold, the portion of the net income derived from the mining of gold shall be exempt from the tax imposed by this title, and the tax on the remaining portion of the net income shall be the proportion of a tax computed without the benefit of this subdivision which such remaining portion of the net income bears to the entire net income.

Sec. 305. That if a tax is computed under this title for a period of less than twelve months, the specific exemption of \$3,000, wherever referred to in this title, shall be reduced to an amount which is the same proportion of \$3,000 as the number of months in the period is of twelve months.

PART III.—CREDITS

Sec. 310. That as used in this title the term "prewar period" means the calendar years 1911, 1912, and 1913, or, if a corporation was not in existence during the whole of such period, then as many of such years during the whole of which the corporation was in existence.

Sec. 311. (a) That the war-profits credit shall consist of the sum of:

(1) A specific exemption of \$3,000; and

(2) An amount equal to the average net income of the corporation for the prewar period, plus or minus, as the case may be, 10 per centum of the difference between the average invested capital for the prewar period and the invested capital for the taxable year. If the tax is computed for a period of less than twelve months such amount shall be reduced to the same proportion thereof as the number of months in the period is of twelve months.

(b) If the corporation had no net income for the prewar period, or if the amount computed under paragraph (2) of subdivision (a) is less than 10 per centum of its invested capital for the taxable year, then the war-profits credit shall be the sum of:

(1) A specific exemption of \$3,000; and

(2) An amount equal to 10 per centum of the invested capital for the taxable year.

(c) If the corporation was not in existence during the whole of at least one calendar year during the prewar period, then, except as provided in subdivision (d), the war-profits credit shall be the sum of:

(1) A specific exemption of \$3,000; and

(2) An amount equal to the same percentage of the invested capital of the taxpayer for the taxable year as the average percentage of net income to invested capital, for the prewar period, of corporations engaged in a trade or business of the same general class as that conducted by the taxpayer; but such amount shall in no case be less than 10 per centum of the invested capital of the taxpayer for the taxable year. Such average

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percentage shall be determined by the commissioner on the basis of data contained in returns made under title II of the revenue act of 1917, and the average known as the median shall be used. If such average percentage has not been determined and published at least 30 days prior to the time when the return of the taxpayer is due, then for purposes of such return 10 per centum shall be used in lieu thereof; but such average percentage when determined shall be used for the purposes of section 250 in determining the correct amount of the tax.

(d) The war-profits credit shall be determined in the manner provided in subdivision (b) instead of in the manner provided in subdivision (c), in the case of any corporation which was not in existence during the whole of at least one calendar year during the prewar period, if (1) a majority of its stock at any time during the taxable year is owned or controlled, directly or indirectly, by a corporation which was in existence during the whole of at least one calendar year during the prewar period, or if (2) 50 per centum or more of its gross income (as computed under section 233 for income tax purposes) consists of gains, profits, commissions, or other income, derived from a government contract or contracts made between April 6, 1917, and November 11, 1918, both dates inclusive.

(e) A foreign corporation shall not be entitled to a specific exemption of \$3,000.

Sec. 312. That the excess-profits credit shall consist of a specific exemption of \$3,000 plus an amount equal to 8 per centum of the invested capital for the taxable year.

A foreign corporation shall not be entitled to the specific exemption of \$3,000.

PART IV.—NET INCOME

Sec. 320. (a) That for the purpose of this title the net income of a corporation shall be ascertained and returned—

(1) For the calendar years 1911 and 1912 upon the same basis and in the same manner as provided in section 38 of the act entitled "An act to provide revenue, equalize duties, and encourage the industries of the United States, and for other purposes," approved August 5, 1909, except that taxes imposed by such section and paid by the corporation within the year shall be included;

(2) For the calendar year 1913 upon the same basis and in the same manner as provided in Section II of the act entitled "An act to reduce tariff duties and to provide revenue for the government, and for other purposes," approved October 3, 1913, except that taxes imposed by section 38 of such act of August 5, 1909, and paid by the corporation within the year shall be included, and except that the amounts received by it as dividends upon the stock or from the net earnings of other corporations subject to the tax imposed by section II of such act of October 3, 1913, shall be deducted; and

(3) For the taxable year upon the same basis and in the same manner as provided for income tax purposes in title II of this act.

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(b) The average net income for the prewar period shall be determined by dividing the number of years within that period during the whole of which the corporation was in existence into the sum of the net income for such years, even though there may have been no net income for one or more of such years.

PART V.—INVESTED CAPITAL

Sec. 325. (a) That as used in this title—

The term "intangible property" means patents, copyrights, secret processes and formulae, good will, trade-marks, trade-brands, franchises, and other like property;

The term "tangible property" means stocks, bonds, notes, and other evidences of indebtedness, bills and accounts receivable, leaseholds, and other property other than intangible property;

The term "borrowed capital" means money or other property borrowed, whether represented by bonds, notes, open accounts, or otherwise;

The term "inadmissible assets" means stocks, bonds, and other obligations (other than obligations of the United States), the dividends or interest from which is not included in computing net income, but where the income derived from such assets consists in part of gain or profit derived from the sale or other disposition thereof, or where all or part of the interest derived from such assets is in effect included in the net income because of the limitation on the deduction of interest under paragraph (2) of subdivision (a) of section 234, a corresponding part of the capital invested in such assets shall not be deemed to be inadmissible assets;

The term "admissible assets" means all assets other than inadmissible assets, valued in accordance with the provision of subdivision (a) of section 326, section 330, and section 331.

(b) For the purposes of this title, the par value of stock or shares shall, in the case of stock or shares issued at a nominal value or having no par value, be deemed to be the fair market value as of the date or dates of issue of such stock or shares.

Sec. 326. (a) That as used in this title the term "invested capital" for any year means (except as provided in subdivisions (b) and (c) of this section):

(1) Actual cash bona fide paid in for stock or shares;

(2) Actual cash value of tangible property, other than cash, bona fide paid in for stock or shares, at the time of such payment, but in no case to exceed the par value of the original stock or shares specifically issued therefor, unless the actual cash value of such tangible property at the time paid in is shown to the satisfaction of the commissioner to have been clearly and substantially in excess of such par value, in which case such excess shall be treated as paid-in surplus: *provided*, that the commissioner shall keep a record of all cases in which tangible property is included in invested capital at a value in excess of the stock or shares issued therefor, containing the name and address of each taxpayer, the business in which engaged, the amount of invested capital and net income shown by the

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return, the value of the tangible property at the time paid in, the par value of the stock or shares specifically issued therefor, and the amount included under this paragraph as paid-in surplus. The commissioner shall furnish a copy of such record and other detailed information with respect to such cases when required by resolution of either house of congress, without regard to the restrictions contained in section 257;

(3) Paid-in or earned surplus and undivided profits; not including surplus and undivided profits earned during the year;

(4) Intangible property bona fide paid in for stock or shares prior to March 3, 1917, in an amount not exceeding (a) the actual cash value of such property at the time paid in, (b) the par value of the stock or shares issued therefor, or (c) in the aggregate 25 per centum of the par value of the total stock or shares of the corporation outstanding on March 3, 1917, whichever is lowest;

(5) Intangible property bona fide paid in for stock or shares on or after March 3, 1917, in an amount not exceeding (a) the actual cash value of such property at the time paid in, (b) the par value of the stock or shares issued therefor, or (c) in the aggregate 25 per centum of the par value of the total stock or shares of the corporation outstanding at the beginning of the taxable year, whichever is lowest: *provided*, that in no case shall the total amount included under paragraphs (4) and (5) exceed in the aggregate 25 per centum of the par value of the total stock or shares of the corporation outstanding at the beginning of the taxable year; but

(b) As used in this title the term "invested capital" does not include borrowed capital.

(c) There shall be deducted from invested capital as above defined a percentage thereof equal to the percentage which the amount of inadmissible assets is of the amount of admissible and inadmissible assets held during the taxable year.

(d) The invested capital for any period shall be the average invested capital for such period, but in the case of a corporation making a return for a fractional part of a year, it shall (except for the purpose of paragraph (2) of subdivision (a) of section 311) be the same fractional part of such average invested capital.

The average invested capital for the prewar period shall be determined by dividing the number of years within that period during the whole of which the corporation was in existence into the sum of the average invested capital for such years.

Sec. 327. That in the following cases the tax shall be determined as provided in section 328:

(a) Where the commissioner is unable to determine the invested capital as provided in section 326;

(b) In the case of a foreign corporation;

(c) Where a mixed aggregate of tangible property and intangible property has been paid in for stock or for stock and bonds and the com-

missioner is unable satisfactorily to determine the respective values of the several classes of property at the time of payment, or to distinguish the classes of property paid in for stock and for bonds, respectively;

(d) Where upon application by the corporation the commissioner finds and so declares of record that the tax if determined without benefit of this section would, owing to abnormal conditions affecting the capital or income of the corporation, work upon the corporation an exceptional hardship evidenced by gross disproportion between the tax computed without benefit of this section and the tax computed by reference to the representative corporations specified in section 328. This subdivision shall not apply to any case (1) in which the tax (computed without benefit of this section) is high merely because the corporation earned within the taxable year a high rate of profits upon a normal invested capital nor (2) in which 50 per centum or more of the gross income of the corporation for the taxable year (computed under section 233 or title II) consists of gains, profits, commissions, or other income, derived on a cost-plus basis from a government contract or contracts made between April 6, 1917, and November 11, 1918, both dates inclusive.

Sec. 328. (a) In the cases specified in section 327 the tax shall be the amount which bears the same ratio to the net income of the taxpayer (in excess of the specific exemption of \$3,000) for the taxable year, as the average tax of representative corporations engaged in a like or similar trade or business, bears to their average net income (in excess of the specific exemption of \$3,000) for such year. In the case of a foreign corporation the tax shall be computed without deducting the specific exemption of \$3,000 either for the taxpayer or the representative corporations.

In computing the tax under this section the commissioner shall compare the taxpayer only with representative corporations whose invested capital can be satisfactorily determined under section 326 and which are, as nearly as may be, similarly circumstanced with respect to gross income, net income, profits per unit of business transacted and capital employed, the amount and rate of war profits or excess profits, and all other relevant facts and circumstances.

(b) For the purposes of subdivision (a) the ratios between the average tax and the average net income of representative corporations shall be determined by the commissioner in accordance with regulations prescribed by him with the approval of the secretary.

In cases in which the tax is to be computed under this section, if the tax as computed without the benefit of this section is less than 50 per centum of the net income of the taxpayer, the installments shall in the first instance be computed upon the basis of such tax; but if the tax so computed is 50 per centum or more of the net income, the installments shall in the first instance be computed upon the basis of a tax equal to 50 per centum of the net income. In any case, the actual ratio when ascertained shall be used in determining the correct amount of the tax. If the correct amount of the tax when determined exceeds 50 per centum

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of the net income, any excess of the correct installments over the amounts actually paid shall on notice and demand be paid together with interest at the rate of $\frac{1}{2}$ of 1 per centum per month on such excess from the time the installment was due.

(c) The commissioner shall keep a record of all cases in which the tax is determined in the manner prescribed in subdivision (a), containing the name and address of each taxpayer, the business in which engaged, the amount of invested capital and net income shown by the return, and the amount of invested capital as determined under such subdivision. The commissioner shall furnish a copy of such record and other detailed information with respect to such cases when required by resolution of either house of congress, without regard to the restrictions contained in section 257.

PART VI.—REORGANIZATIONS.

Sec. 330. That in the case of the reorganization, consolidation, or change of ownership after January 1, 1911, of a trade or business now carried on by a corporation, the corporation shall for the purposes of this title be deemed to have been in existence prior to that date, and the net income and invested capital of such predecessor trade or business for all or any part of the prewar period prior to the organization of the corporation now carrying on such trade or business shall be deemed to have been the net income and invested capital of such corporation.

If such predecessor trade or business was carried on by a partnership or individual the net income for the prewar period shall, under regulations prescribed by the commissioner with the approval of the secretary, be ascertained and returned as nearly as may be upon the same basis and in the same manner as provided for corporations in title II, including a reasonable deduction for salary or compensation to each partner or the individual for personal services actually rendered.

In the case of the organization as a corporation before July 1, 1919, of any trade or business in which capital is a material income-producing factor and which was previously owned by a partnership or individual, the net income of such trade or business from January 1, 1918, to the date of such reorganization may at the option of the individual or partnership be taxed as the net income of a corporation is taxed under titles II and III; in which event the net income and invested capital of such trade or business shall be computed as if such corporation had been in existence on and after January 1, 1918, and the undistributed profits or earnings of such trade or business shall not be subject to the surtax imposed in section 211, but amounts distributed on or after January 1, 1918, from the earnings of such trade or business shall be taxed to the recipients as dividends, and all the provisions of titles II and III relating to corporations shall, so far as practicable, apply to such trade or business: *provided*, that this paragraph shall not apply to any trade or business the net income of which for the taxable year 1918 was less than 20 per centum of its invested capital for such year: *provided further*, that any taxpayer who takes advantage of this paragraph shall pay the tax imposed

by section 1000 of this act and by the first subdivision of section 407 of the revenue act of 1916, as if such taxpayer had been a corporation on and after January 1, 1918, with a capital stock having no par value.

If any asset of the trade or business in existence both during the taxable year and any prewar year is included in the invested capital for the taxable year but is not included in the invested capital for such prewar year, or is valued on a different basis in computing the invested capital for the taxable year and such prewar year, respectively, then under rules and regulations to be prescribed by the commissioner, with the approval of the secretary, such readjustments shall be made as are necessary to place the computation of the invested capital for such prewar year on the basis employed in determining the invested capital for the taxable year.

Sec. 331. In the case of the reorganization, consolidation, or change of ownership of a trade or business, or change of ownership of property after March 3, 1917, if an interest or control in such trade or business or property of 50 per centum or more remains in the same persons, or any of them, then no asset transferred or received from the previous owner shall, for the purpose of determining invested capital, be allowed a greater value than would have been allowed under this title in computing the invested capital of such previous owner if such asset had not been so transferred or received: *provided*, that if such previous owner was not a corporation, then the value of any asset so transferred or received shall be taken at its cost of acquisition (at the date when acquired by such previous owner) with proper allowance for depreciation, impairment, betterment or development, but no addition to the original cost shall be made for any charge or expenditure deducted as expense or otherwise on or after March 1, 1913, in computing the net income of such previous owner for purposes of taxation.

PART VII.—MISCELLANEOUS.

Sec. 335. (a) That if a corporation (other than a personal service corporation) makes return for a fiscal year beginning in 1917 and ending in 1918, the tax for the first taxable year under this title shall be the sum of: (1) the same proportion of a tax for the entire period computed under title II of the revenue act of 1917 which the portion of such period falling within the calendar year 1917 is of the entire period, and (2) the same proportion of a tax for the entire period computed under this title at the rates specified in subdivision (a) of section 301 which the portion of such period falling within the calendar year 1918 is of the entire period.

Any amount heretofore or hereafter paid on account of the tax imposed for such fiscal year by title II of the revenue act of 1917 shall be credited toward the payment of the tax imposed for such fiscal year by this title, and if the amount so paid exceeds the amount of the tax imposed by this title, the excess shall be credited or refunded to the corporation in accordance with the provisions of section 252.

(b) If a corporation makes return for a fiscal year beginning in 1918 and ending in 1919, the tax for such fiscal year under this title shall be

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the sum of: (1) the same proportion of a tax for the entire period computed under subdivision (a) of section 301 which the portion of such period falling within the calendar year 1918 is of the entire period, and (2) the same proportion of a tax for the entire period computed under subdivision (b) or (c) of section 301 which the portion of such period falling within the calendar year 1919 is of the entire period.

(c) If a partnership or a personal service corporation makes return for a fiscal year beginning in 1917 and ending in 1918, it shall pay the same proportion of a tax for the entire period computed under title II of the revenue act of 1917 which the portion of such period falling within the calendar year 1917 is of the entire period.

Any tax paid by a partnership or personal service corporation for any period beginning on or after January 1, 1918, shall be immediately refunded to the partnership or corporation as a tax erroneously or illegally collected.

Sec. 336. That every corporation, not exempt under section 304, shall make a return for the purposes of this title. Such returns shall be made, and the taxes imposed by this title shall be paid, at the same times and places, in the same manner, and subject to the same conditions, as is provided in the case of returns and payment of income tax by corporations for the purposes of title II, and all the provisions of that title not inapplicable, including penalties, are hereby made applicable to the taxes imposed by this title.

Sec. 337. That in the case of a bona fide sale of mines, oil or gas wells, or any interest therein, where the principal value of the property has been demonstrated by prospecting or exploration and discovery work done by the taxpayer, the portion of the tax imposed by this title attributable to such sale shall not exceed 20 per centum of the selling price of such property or interest.

TITLE XIV.—GENERAL PROVISIONS.

Sec. 1400. (a) That the following parts of acts are hereby repealed, subject to the limitations provided in subdivision (b):

(1) The following titles of the revenue act of 1916:

Title I (called "income tax");

Title II (called "estate tax");

Title III (called "munitions manufacturers' tax"), as amended;

Title IV (called "miscellaneous taxes").

(2) The following parts of the act entitled "An act to provide increased revenue to defray the expenses of the increased appropriations for the army and navy and the extensions of fortifications, and for other purposes," approved March 3, 1917:

Title III (called "estate tax");

Section 402 (called "returns of dividends").

(3) The following titles of the revenue act of 1917:

Title I (called "war income tax");

Title II (called "war excess-profits tax");

Title III (called "war tax on beverages");

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Title IV (called "war tax on cigars, tobacco, and manufactures thereof");

Title V (called "war tax on facilities furnished by public utilities, and insurance");

Title VI (called "war excise taxes");

Title VII (called "war tax on admissions and dues");

Title VIII (called "war stamp taxes");

Title IX (called "war estate tax");

Title X (called "administrative provisions");

Title XII (called "income tax amendments").

(b) Such parts of acts shall remain in force for the assessment and collection of all taxes which have accrued thereunder, and for the imposition and collection of all penalties or forfeitures which have accrued and may accrue in relation to any such taxes, and except that the unexpended balance of any appropriation heretofore made and now available for the administration of any such part of an act shall be available for the administration of this act or the corresponding provision thereof: *provided*, that, except as otherwise provided in this act, no taxes shall be collected under title I of the revenue act of 1916 as amended by the revenue act of 1917, or title I or II of the revenue act of 1917, in respect to any period after December 31, 1917: *provided further*, that the assessment and collection of all estate taxes and the imposition and collection of all penalties or forfeitures, which have accrued under title II of the revenue act of 1916 as amended by the act entitled "An act to provide increased revenue to defray the expenses of the increased appropriations for the army and navy and the extensions of fortifications, and for other purposes," approved March 3, 1917, or title IX of the revenue act of 1917, shall be according to the provisions of title IV of this act.

In the case of any tax imposed by any part of an act herein repealed, if there is a tax imposed by this act in lieu thereof, the provision imposing such tax shall remain in force until the corresponding tax under this act takes effect under the provisions of this act.

Title I of the revenue act of 1916 as amended by the revenue act of 1917 shall remain in force for the assessment and collection of the income tax in Porto Rico and the Philippine Islands, except as may be otherwise provided by their respective legislatures.

Sec. 1401. That section 1100 of the revenue act of 1917 is hereby repealed, to take effect on July 1, 1919, and thereafter the rate of postage on all mail matter of the first class shall be the same as the rate in force on October 2, 1917: *provided*, that letters written and mailed by soldiers, sailors, and marines assigned to duty in a foreign country engaged in the present war may be mailed free of postage, subject to such rules and regulations as may be prescribed by the postmaster general.

Section 1107 of such act is hereby repealed, to take effect July 11, 1919.

Sec. 1402. That if any clause, sentence, paragraph, or part of this act shall for any reason be adjudged by any court of competent jurisdiction

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to be invalid, such judgment shall not affect, impair, or invalidate the remainder of this act, but shall be confined in its operation to the clause, sentence, paragraph, or part thereof directly involved in the controversy in which such judgment has been rendered.

Sec. 1403. That the revenue act of 1916 is hereby amended by adding at the end thereof a section to read as follows:

"Sec. 903. That this act may be cited as the 'revenue act of 1916.'"

Sec. 1404. That the revenue act of 1917 is hereby amended by adding at the end thereof a section to read as follows:

"Sec. 1303. That this act may be cited as the 'revenue act of 1917.'"

Sec. 1405. That this act may be cited as the "revenue act of 1918."

Sec. 1406. That all persons serving in the military or naval forces of the United States during the present war who have, since April 6, 1917, resigned or been discharged under honorable conditions (or, in the case of reservists, been placed on inactive duty), or who at any time hereafter (but not later than the termination of the current enlistment or term of service) in the case of the enlisted personnel and female nurses, or within one year after the termination of the present war in the case of officers, may resign or be discharged under honorable conditions (or, in the case of reservists, be placed on inactive duty), shall be paid, in addition to all other amounts due them in pursuance of law, \$60 each.

This amount shall not be paid (1) to any person who though appointed or inducted into the military or naval forces on or prior to November 11, 1918, had not reported for duty at his station on or prior to such date; or (2) to any person who has already received one month's pay under the provisions of section 9 of the act entitled "An act to authorize the president to increase temporarily the military establishment of the United States," approved May 18, 1917; or (3) to any person who is entitled to retired pay; or (4) to the heirs or legal representatives of any person entitled to any payment under this section who has died or may die before receiving such payment. In the case of any person who subsequent to separation from the service as above specified has been appointed or inducted into the military or naval forces of the United States and has been or is again separated from the service as above specified, only one payment of \$60 shall be made.

The above amount, in the case of separation from the service on or prior to the passage of this act, shall be paid as soon as practicable after the passage of this act, and in the case of separation from service after the passage of this act shall be paid at the time of such separation.

The amounts herein provided for shall be paid out of the appropriations for "pay of the army" and "pay of the navy," respectively, by such disbursing officers as may be designated by the secretary of war and the secretary of the navy.

The secretary of war and the secretary of the navy respectively shall make all regulations necessary for the enforcement of the provisions of this section.

Sec. 1407. That the provisions of section 5 of the act entitled "An act making appropriations for the service of the post office department for the fiscal year ending June 30, 1918, and for other purposes," approved March 3, 1917, relating to intoxicating liquors in interstate commerce, as amended by section 1110 of an act entitled "An act to provide revenue to defray war expenses and for other purposes," approved October 3, 1917, be, and the same are hereby, made applicable to the District of Columbia.

Sec. 1408. That every person who on or after April 6, 1917, has entered into any contract, undertaking, or agreement with the United States, or with any department, bureau, officer, commission, board, or agency under the United States or acting in its behalf, or with any other person having contract relations with the United States, for the performance of any work or the supplying of any materials or property for the use of or for the account of the United States, shall, within thirty days after a request of the commissioner therefor, file with the commissioner a true and correct copy of every such contract, undertaking, or agreement.

Whoever fails to comply with such request of the commissioner shall be guilty of a misdemeanor and shall be punished by a fine of not more than \$1,000, or by imprisonment for not more than one year, or both.

The commissioner shall (when not violative of the technical military or naval secrets of the government) have access to all information and data relating to any such contract, undertaking, or agreement, in the possession, control or custody of any department, bureau, board, agency, officer or commission of the United States and may call upon any such department, bureau, board, agency, officer or commission for a full statement and description of any allowance for amortization, obsolescence, depreciation or loss, or of any valuation, appraisal, adjustment or final settlement, made in pursuance of any such contract, undertaking, or agreement.

Sec. 1409. That unless otherwise herein specially provided, this act shall take effect on the day following its passage.

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EDITED BY SEYMOUR WALTON, C.P.A.

(ASSISTED BY H. A. FINNEY, C.P.A.)

INSTITUTE EXAMINATION

NOVEMBER, 1918

In regard to the following attempt to present the correct solutions to the questions asked in the examination held by the American Institute of Accountants in November, 1918, the reader is cautioned against accepting the solutions as official. They have not been seen by the examiners—still less endorsed by them.

ACCOUNTING THEORY AND PRACTICE

PART II

Question 1:

Mention and explain two common views concerning the treatment of donated capital stock.

Answer:

Two reasons may be mentioned for the donation of stock by the stockholders of a corporation: (a) for the purpose of providing working capital with which to carry on the business; and (b) to cover losses that have been incurred and thus to wipe out a deficit, or to change it into a surplus. The object for which the donation is made should govern the treatment.

(a) When a mine, a plantation for a prospective fruit ranch or some similar property is sold by a promoter to a corporation, it is quite common to issue to the promoter the entire capital stock of the corporation in full payment for the property. As the corporation would then have no means of raising money for the purpose of developing the property, and as the promoter's stock is of no value unless the property is developed, the promoter donates to the corporation part, usually half, of his stock to be sold for the purpose of providing working capital. As the stock was fully paid by the transfer of the property, it is legitimate to charge it to treasury stock, which can be sold at less than par without making the purchaser liable for the discount.

If the property acquired with the stock were really worth in cash the par value of the stock, this donation would represent a real profit and would be a legitimate credit to surplus. It is evident that such is not the case, because the promoter by his relinquishment of half of the stock acknowledges that the price was excessive. However, it will not do to credit the donated stock to the property account, because that would be to put on record the fact that the property was worth only part of what was paid for it. To avoid this, and also to designate the purpose for which the stock was donated, the proper credit is to donated working capital.

If the treasury stock is sold at a discount, the discount is eventually charged against donated working capital account. This will leave that

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account with a credit balance equal to the cash received for the stock when it is all sold. This balance can be transferred to the credit of the property account, the latter account having been charged with the real assets and the development expenses paid for out of the proceeds of the treasury stock.

(b) When a business has been run at a loss for a time, but is showing signs of coming prosperity, the stockholders may agree to an assessment which will be an out-and-out gift and therefore a profit. This gift may be in stock to be sold, if the business needs ready money, or to be held as treasury stock until a time when the operating profits will justify the return of the stock by a stock dividend. As the object of the donation was to make good the previous deficit, the credit is properly to deficit account. If the donation is large enough to create a credit balance in deficit account, it will, of course, be transferred to surplus.

Question 2:

What is the status of a company in the hands of the alien property custodian with regard to the capital stock tax as required by the revenue act of September 8, 1916?

Answer:

A company in the hands of the alien property custodian would not be subject to the capital stock tax. This tax is imposed "with respect to the carrying on or doing business" by a corporation. It has been officially ruled that a corporation all of whose property and business is operated by or in the hands of the alien property custodian is not doing business.

Question 3:

A manufacturing concern having several branch offices for the sale of its product is in the habit of billing the branches at the wholesale price and expects each branch to show a profit. A balance-sheet is prepared in which the current accounts with the branches (after closing out their profits and losses into head office) are carried as accounts receivable. These branches carry a considerable stock of merchandise and have their own accounts receivable and possibly some outstanding accounts payable. How would the above balance-sheet have to be modified in order to show correctly the financial condition of the business?

Answer:

Carrying the debit balances of branch offices as accounts receivable of the head office is entirely wrong. The expression "accounts receivable" is always used to designate customers to whom goods have been sold in regular course of business. A branch office is not a customer, it is part of the main concern, and its assets and liabilities are those of the head office itself and should be so shown on the balance-sheet. They may be combined with the corresponding accounts of the head office or shown separately. Thus the merchandise may be included in the total merchandise on hand or may appear as an addition to the head office inventory thus:

Inventory, head office
Inventory at branches

xxxxxx

xxxxxx

xxxxxxxxx

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The valuation must be at cost—not at the wholesale selling price.

While it makes no difference in the net worth of the whole business, the inclusion of branch balances among the accounts receivable gives a wrong idea of the financial condition. Accounts of customers are supposed to be extremely quick assets. To include inventories with them is to give an erroneous impression of the ability of the business in regard to quickly available cash resources. In addition, there are still selling expenses to be incurred before the branch merchandise can be converted into true accounts receivable, not to mention the overvaluation.

Question 4:

(a) What items do you consider should be charged or credited direct to surplus?

(b) Would you regularly make small adjustments of subsequently discovered errors through this account?

(c) Is the balance at credit of surplus ever in any circumstances a liability, and, if so, to whom?

Answer:

(a) Those items which are not part of the regular, normal conduct of a business at any time, or, although of an ordinarily normal nature, are not applicable to the business of the current year,

In the first category fall such items as a loss by fire and the profit or loss consequent upon the sale of a fixed asset. The object of the profit and loss account is the determination of the amount of the net profit of a concern conducting a business of a certain character. If such a concern credits profit and loss with the gain on a piece of real estate sold, it has falsified the record and has destroyed the basis of comparison between the profits of different years.

In the second category fall those items that are corrections of erroneous charges or credits to profit and loss in previous years. As these errors affected the final net credit to surplus in the years in which they occurred, it follows that the present surplus is larger or smaller in consequence and therefore is the account to be corrected.

(b) If the items are few in number and trivial in size, one could not be very severely blamed for letting them appear in the current accounts. In the interest of exact statistics, errors that are of any importance should be adjusted through a surplus adjustment account, by the aid of which exact statements of the transactions of previous years may be prepared by recasting the previous statements.

(c) The balance at the credit of surplus can be considered a liability of the business to the stockholders who own the business, but only by those who claim that the business may be treated as distinct from the capital that owns it. Capital, including surplus, is a liability only in the sense that after all the outside liabilities are paid, capital can claim payment of what is left.

Question 5:

Give some idea of what taxes you would charge against income and what against surplus. Of the former, which, if any, would you take up into manufacturing costs? What provision, if any, would you make for income and excess profits taxes in closing accounts before the passing of

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a pending act levying these taxes, either in general circumstances or when profits are partly divisible under some special contract or arrangement?

Answer:

If a reserve for taxes levied for the previous year, but not payable until the current year, was not set up at the close of that previous year, the tax when paid should be charged to surplus, and at the end of the current year a reserve should be set up for accrued taxes by a charge against income.

Real estate taxes on the factory, when it is owned by the business, should be charged as an overhead manufacturing cost. It is necessary that a factory should occupy land and buildings, therefore all the essential expenses of owning and maintaining them are part of the cost of the processes carried on in the buildings.

Personal property taxes should be considered a general or financial expense. Federal taxes are deductions from income, not chargeable as operating expenses, but are debited to profit and loss after the operating profit has been determined. However, income and excess profit taxes may be considered as disposition of profits and may then be charged to surplus. This is on the theory that the government is a preferred partner in the profits only, and that the tax is its preferred dividend.

If the amount of a tax that has accrued is not known when the accounts are closed, an estimate should be made of the probable amount, based on the indications that may be available as to the rate that may be finally adopted. If profits are partly divisible under some special contract, the amount must be agreed upon by all parties in interest, but a better plan would be to divide the profits after allowing for the highest possible tax, and then to adjust the division later, when the actual tax is known.

Question 6:

Give some principles to determine a proper disposition of the cost of enlarging a plant, including a partial re-building of the old portion.

In case you have insufficient data to enable you to apply these principles satisfactorily, offer some solution of the difficulty.

Answer:

All the cost of enlarging the plant should be charged to plant account, as the new construction is equivalent to building a new addition to it, increasing its intrinsic value to the extent of its cost.

The cost of re-building part of the old portion should be charged to reserve for depreciation to the extent that it is an exact reproduction. Any extra cost, constituting additional value, should be charged to plant account. The best way to accomplish this is to charge the new construction to plant, and then to credit plant and charge reserve for depreciation with the cost of the replaced portion.

If the payrolls, material vouchers and other data are not such as to make it possible to determine from them the cost of the new and the replacement work respectively, I would have to rely on the best judgment of the persons who superintended the work. If an architect were employed or if one contractor did all the work, the opinion of either of them would be conclusive.

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Question 7:

What are the distinguishing characteristics of the "corporation" as compared with other forms of business organization? What privileges does it carry and what, if any, are its disadvantages?

Answer:

The two questions can be answered at the same time.

Advantages of incorporating.

(a) **Limited liability.** In a partnership, each partner is liable for the partnership debts to the full extent of his private fortune. In a corporation, the general rule is that the corporation's creditors must look to the corporation's assets for the payment of their claims, and the stockholder is thus liable to lose only the amount of his investment. There are some exceptions to this general rule.

(b) **Continuous life.** A partnership is automatically dissolved by the death or insolvency of any partner. A partner cannot sell his interest in the business without the consent of the other partners, and an attempted sale dissolves the partnership. If a partnership is for a fixed period, no partner has the right to withdraw before the end of the period, but he has the power to do so and may exercise this power, even in the absence of right, and so dissolve the partnership, rendering himself liable for damages.

A corporation, on the other hand, continues its existence without regard to the condition or personnel of its stockholders, until it is terminated by expiration of the period for which it was incorporated, by voluntary dissolution, by judicial action or by forfeiture of its charter.

(c) **Legal entity.** The law does not recognize the existence of a partnership as an entity apart from the partners who compose it. Therefore in suing or being sued, the partners must be treated as individuals doing business under a firm name. Since a partner cannot be both plaintiff and defendant in the same suit, a partnership cannot sue one of its partners, nor can a partner sue the partnership. A corporation, being a separate legal entity, can sue or be sued in its own name, either by outsiders or by its own stockholders.

(d) **Availability.** The holder of shares in a corporation can readily dispose of them by sale or will, without the consent of the other holders, except in the case of a pooling agreement. He can also use them as collateral for loans without prejudice to the business. A member of a firm can realize on his investment only by winding up the business, or by obtaining the consent of the other partners to a sale of his interest.

(e) **Larger capital.** The use of the corporate form provides for increased capital by the sale of shares to outside investors, who may be willing to risk definite sums but would not be willing to assume the indefinite risk involved in a general partnership.

(f) **Ease of management.** In a partnership, unless the rule is modified by agreement, all partners have a right to equal participation in the management of the business, and there is no well defined method of enforcing the will of the majority. Hence there is liable to be dissension and

dispute, and, in the case of an even number of partners, there may be a deadlock which it will be impossible to break. Each partner has implied legal authority to bind the partnership in matters within the scope of the partnership business, and this authority has frequently operated to the disadvantage of a firm.

Stockholders have no authority to bind the corporation. Their only control lies in the election of a board of directors and a review of its activities. The corporation is managed by the directors, who meet periodically to outline the general policy of the business, and in the meantime delegate the actual conduct of affairs to a president and other officers with definite powers, their action being subject to supervision by the stockholders at their annual meeting. This delegation of definite authority tends to eliminate the friction and the hazard which prevail in partnership management.

Disadvantages of incorporating. Some of these are:

(a) Less freedom of action. In case of a contingency arising when prompt action is necessary, partners can decide on what should be done without any delay, while in a corporation it may be necessary to call a formal meeting of the board of directors after due notice to each member.

(b) Restrictions as to character of business. A corporation is restricted to the kind of business which it was given authority under its charter to carry on, while a partnership can conduct any legal business and can change from one business to another without consulting the state officers.

(c) Restrictions as to capital. A partnership may change its capital at will by investments and withdrawals, the drawing of profits being accomplished without restriction or formality. A corporation can increase or decrease its authorized capitalization only after compliance with the legal requirements of the jurisdiction in which it is incorporated. Division of assets among stockholders during the life of the corporation can be made only from accumulated profits and not from invested capital, and the distribution of profits must be preceded by a formal declaration of dividends.

(d) Restrictions as to investments. In some states it is illegal for one corporation to invest in the stock of another corporation, or to acquire and hold its own stock as treasury stock, or to own real estate which is not required for the operation of its business.

(e) Taxes and reports. The federal and state governments have been inclined to require corporations to make compensation for their peculiar privileges by the payment of special taxes, among which are the organization and franchise taxes, stock transfer taxes and the federal corporation tax. Moreover a close supervision has been maintained over corporate activities through the medium of extensive reports.

Question 8:

There is a confusion in the minds of many people between statements of "revenue and expense" on the one hand and of "receipts and payments" on the other hand. Discuss the distinctive features of such statements showing wherein they differ.

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Answer:

Revenue, or income represents a clear gain in value, whether received at present or to be received in the future, provided its eventual receipt is reasonably certain. It includes the gain from all sources, whether collected or not, even if accrued only but not yet due. Expense includes everything which tends to reduce value or create loss, whether paid or not, even if accrued but not yet due, or only estimated, as in the case of depreciation for which allowance is made.

Receipts include only those items which have been collected in cash. Not only may they include items of a capital nature which have no effect on profits or losses, but also items which do not belong to the period for which the accounts are being made up and are merely the collection of items which have come over from a previous period. In the same way payments may represent disbursement of cash for capital assets and for expenses which are for the benefit of a subsequent period. Neither receipts nor payments include items that are accrued only, nor those which are estimated.

Question 9:

Can you suggest any circumstances in which goodwill would appear in the books of a partnership?

Answer:

Goodwill may appear on the books of a partnership when one partner retires from the firm and is paid a sum in addition to the book value of his interest. This additional amount may be charged to goodwill as representing the amount actually paid, or it may be taken as a measure of one partner's share and each of the remaining partners may be credited with a similar amount, which would also be charged to goodwill. The latter is seldom done as it puts too large an undesirable asset on the books. In fact, it is better to charge the amount paid to the retiring partner against the capital account of the remaining partners in their profit-sharing ratio, and avoid the use of goodwill entirely.

It may also appear when a new partner is taken into a firm, the old partners being allowed a goodwill for the business they have built up. It should be credited to the old partners' capital accounts in their profit-sharing ratio, before the new partner pays in his capital.

It may also appear when a firm sells its entire business to another firm or to a corporation for more than its book value. In order to divide the proceeds of the sale equitably between the partners, it is necessary to put the excess price on the books of the partnership, crediting the partners in their profit-sharing ratio, and thus reaching a basis for the division of the cash or stock received for the business.

Question 10:

A company makes machines of a highly technical nature which it rents out, but refuses to sell, to its customers. These machines, if kept in good order, are calculated to last almost indefinitely, but say for at least 20 years. They are, on the other hand, liable to be superseded at any time

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by new devices or methods. How would you treat the original capital value on the books of the company? (Assume that two years' rental would, in each case, liquidate the first cost.)

Answer:

Owing to the danger of supersession, the safest plan would be to credit all the rental from each machine to a reserve account for two years, so that its cost would be entirely taken up, and after that to credit all rental to profit and loss. This would result in the company's showing a deficit equal to all its expenses above manufacturing cost for two years on each successive lot of machines, before it would have any profits against which to charge these expenses, with a margin gradually to reduce the deficit. This treatment would be too drastic to be satisfactory. It would be better to set up a reserve only after the expenses had been provided for, thus avoiding the deficit, but not allowing for any surplus for the first two years at least plus the time that it takes to overtake the general expenses. That is, if the general expenses were one-third of the manufacturing cost, it would take three years' rentals to clear the cost of a machine from the books. After the first set of machines was thus paid for, the subsequent output would be half paid for on the average, if the output was always steady. It is almost certain that, even if better new machines were devised at any time thereafter, this company would still be able to keep enough of its own machines rented to enable it to get out a good deal more than merely clear of loss. Because it would take time for competition to develop, the company would be safe in declaring dividends, even before payment for the first machines had been completed.

Question II:

What are the present requirements of the federal reserve banks in regard to the verification of the accounts of companies whose paper is submitted by member banks for rediscount?

Answer:

The requirements seem to differ in different districts. In one district the reserve bank does not require a copy of the statement furnished by the borrower to the member bank at the time the loan is made. This is subject to certain modifications when there is any particular reason for making a more thorough investigation. It is left to the member bank to exercise discretion because of its liability as an endorser when the rediscount is made.

In another district the reserve bank requires a statement of the borrower's condition prepared by a certified public accountant.

When not endorsed by a member bank, a trade acceptance or bill of exchange is not eligible for purchase by the reserve bank unless a satisfactory statement of one or more of the parties thereto has been furnished. However, this is beside the question, as paper submitted by member banks would be endorsed by them.

The application made to the reserve bank by a member bank for rediscount of paper contains a column headed "Have you statement on file?" and a provision that the reserve bank reserves the privilege of asking for copies of financial statements where they are on file. Such statements

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must be on file with respect to all notes which have been purchased from others than a depositor or a member bank. A blank form of statement is furnished to be used when required by the member bank or by the reserve bank but it is nowhere stated that this statement should be prepared or verified by a professional accountant. This is true in at least one of the federal reserve districts, whatever may be the practice in others.

REPLY TO JOSEPH ROBINSON.

Since *THE JOURNAL OF ACCOUNTANCY* has given seven pages to Mr. Joseph Robinson in the December, 1918, number devoted to criticisms of this department, we feel that silence on our part might be construed into a confession that his strictures are just and that his arguments are well founded.

The first subject he treats of is the celebrated Safety Razor Company and its subsidiaries. One of the peculiarities of this problem is the frequency with which persons who reason only from superficial analysis insist, like Mr. Robinson that the goodwill in the consolidated balance-sheet is \$1,630,000, or \$100,000 more than the goodwill allowed by us, corroborated by the excellent authority of A. E. Anderson and David Himmelblau.

The problem is too long to reproduce here; therefore reference is made to it as it appears in the December number. The principal point at issue is the time at which the L. W. Company added \$100,000 to the book value of 2,000 shares of the Steel Blade Company stock and credited surplus with a corresponding amount. The problem gives no hint as to the time, merely stating the fact that at December 31, 1912, the stock was carried at \$400,000, but cost only \$300,000. Confining ourselves entirely to the L. W. Company, the net assets which were purchased by the Safety Razor Company on March 31, 1912, were of course, represented by the L. W. capital stock of \$400,000, its surplus of \$605,000 and the profits since January 1, 1912, of \$30,000, a total of \$1,035,000. This would be real net assets if the write-up of the Steel Blade stock had not yet been made. Mr. Robinson assumes that it had been made, thereby reducing the actual assets acquired by the Safety Razor Company by \$100,000 and consequently increasing the goodwill acquired, since the goodwill is the difference between the actual net assets acquired and the amount paid for the stock.

Since the problem is silent as to the time, the question becomes one of probability. Mr. Robinson says that we have to use our imagination, but we prefer to think that an examination of the probabilities is more trustworthy. He says: "Isn't it against reason that L. W. wrote up the investment between January 1 and March 31, 1912, in the face of S. B. Company's loss of \$15,000 during that period?" He then says: "It appears to me that the only logical assumption is that the write-up occurred prior to January 1, 1912, and is included in L. W. Company's January 1, 1912, surplus of \$605,000.

Suppose we let our imagination rest awhile and look at the facts. If the write-up of the stock had any justification whatever, it would be found in a large increase in earning power, which would give it additional value

as an investment. There are three periods involved in the problem: that prior to January 1, 1912; that from January 1 to March 31, 1912; and that from April 1 to December 31, 1912. In the first period, the Steel Blade Company had acquired a deficit of \$50,000; in the second period it had increased this deficit by \$15,000, making it \$65,000. There is not much excuse for writing-up the stock to be found in these figures. In the third period this deficit of \$65,000 is changed to a surplus of \$35,000, which means a profit of \$100,000 in nine months, which would be at an annual rate of \$133,333 on a capital of \$600,000, or more than 22 per cent. Now, if ever, there is a good excuse to raise the valuation of the stock. Mr. Robinson's imagination seems to have become exhausted before he reached this third period, as he ignores it altogether.

Let us now examine the effect upon the L. W. Company. Its surplus at January 1 was \$605,000. Before December 31 it paid a dividend of \$100,000, reducing its surplus to \$505,000. On December 31 its adjusted surplus was \$700,000. Therefore its profits for the year must have been \$195,000, of which only \$30,000 was made during the first 3 months, leaving \$165,000 to be earned in the remaining 9 months. While this is by no means impossible, it is much more probable that the profits of the last 9 months were only \$65,000 and that the L. W. directors offset the reduced rate of profit by writing up the investment. By itself, this argument would be very weak. Its only value lies in its corroboration of the previous argument.

If Mr. Robinson's contention for a goodwill of \$1,630,000 were allowed, the effect would be to increase the consolidated surplus by \$100,000. As the common stock is only \$1,500,000, the goodwill, even at \$1,530,000, represents part of the preferred stock at the time of the purchase. In the face of this condition it would seem as if the smaller goodwill would appeal to the imagination of the conservative accountant, if there is any reasonable ground for adopting it.

But Mr. Robinson has not done with us yet, although he selects only one culprit for discipline. He says, referring to Mr. Walton, "And then he makes a grave mistake. On the books of the Safety Razor Company (the parent company) he credits the \$100,000 dividend from the L. W. Company to surplus." He explains that since \$30,000 was earned prior to the purchase of the L. W. stock, and that, according to our figures, only \$95,000 was earned, there should be a credit to surplus of only \$65,000 and that \$35,000 should be credited to the investment account. As there is no investment account in a consolidated balance-sheet, the credit must be applied to goodwill.

This is a matter of opinion and the fact that an opinion does not meet the views of Mr. Robinson does not necessarily constitute it a "grave mistake." Whatever may be the British view, it is generally considered in this country that a dividend received is a profit in the period in which it is declared. Therefore, the Safety Razor Company would naturally credit the whole \$100,000 as a profit, especially as it had already credited the goodwill with the \$30,000 earned by L. W. prior to the purchase, by

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adding it to the capital and surplus of January 1, 1912, to represent net assets of \$1,035,000, as already shown. Mr. Robinson wishes us to credit this twice.

ANTICIPATING PROFITS.

In the Spencer and Munton joint adventure problem Mr. Robinson criticizes the solution given by us in regard to the only point of any importance in the problem. It is not necessary to examine the whole problem to elucidate this point. Briefly, one item of the venture consists of 100 cases of commodity B, the cost of which has been lumped with that of other goods. Spencer (one of the partners in the venture) "takes 10 cases of commodity B valued at \$47.50." Afterwards the remaining 90 cases of B are exchanged for 30 cases of commodity C, which the two partners divide between them. Of course, they should be charged with the goods that they take—the only question is as to the price.

In our answer we claim that since one of the partners was charged \$4.75 per case for commodity B, it established an equitable price as between partners, whatever the goods may have been worth on the market. As each partner received the equivalent of 45 cases of commodity B, he must be charged with \$213.75.

Mr. Robinson injects into this problem the entirely extraneous idea of unrealized profits. He says:

"Spencer should have taken the goods at or near market value, and very likely he did; but if he did not Munton does not make a profit on the goods he takes, and Spencer does not make a profit on the goods Munton takes, and Munton sacrifices profits on all goods taken by Spencer in excess of his own takings of similar goods.

"If the goods were taken at market value, Spencer is crediting profits on goods taken by himself, and Munton is crediting profits on goods he took, and the goods taken by each are valued at the market price on the books of each, and the anticipated profits on those goods are included in the \$106.79 credited by each as their net profits.

"If to Spencer and Munton the goods are raw materials the supposed profits would be considered as profits only for adventure statistics, and should be treated as a reduction of the cost of the material.

"The question of unrealized profits is the most important part of the problem and a solution without a discussion of it ought not to be considered correct."

The reason why Spencer should have taken the goods at market value may exist in Mr. Robinson's imagination, but he has not let it escape. Partners are often allowed to take goods at cost.

The price at which the goods are taken is absolutely immaterial, so long as it was mutually satisfactory. If Spencer could afford to pay a certain price for them, there is no reason why both of them should not afford the same price. It is not necessary that this price should be cost in order to avoid an anticipation of profits. It is only necessary that it should not be more than Spencer and Munton would have to pay in the open market for commodity C, which they evidently can use and they

would have to buy at market price if they did not take their own. It would be a silly thing for them to put up the price of commodity C, so as to show a nominal profit on the venture merely to lose it in their regular business.

Mr. Robinson says: "Undoubtedly the problem was originated for the sole purpose of testing the candidate's knowledge of adventure accounts, and I hazard the guess that the originator had no idea that it raises the question of unrealized profits." Probably because no such idea is admissible.

CLUB INITIATION FEES

Again Mr. Robinson singles out one person for his criticism, when he says:

"Authorities tell us that membership fees and initiation fees are a source of profit to a club, but are not usually considered operating profits. Mr. Seymour Walton goes so far as to say that if a club is sufficiently prosperous to afford it they should not be credited to profits at all but should be considered capital receipts which should be used to pay for the club property or to redeem bonds. He apparently says that the financial condition determines the accounting treatment, but of course he does not mean that. Undoubtedly he will agree that the purpose of the fee determines the treatment. If for the purpose of obtaining money with which to purchase club property or to retire indebtedness or to create a reserve or for other particular purposes, the fees are not operating profits in any sense but are donated surplus. I see no reason at all why the fees do not become operating profits after the particular purpose has been achieved. If property were purchased the repairs, renewals and depreciation would be operating charges and the fees should be treated as operating income to offset those charges."

Mr. Walton says that he does mean exactly that, but calls attention to the fact that the words are "accounting treatment" and not accounting principles. Theoretically the initiation fees are a capital receipt, paid in to give a permanent capital to the club, so that it can invest in fixed assets, even if these fixed assets are no more than furniture in a rented building. Unfortunately, many clubs, after a short period of prosperity in which they are able to pay for part, if not all, of the fixed assets that they need, experience a slump, when the ordinary operating income is not sufficient to pay the expenses, and violent hands have to be laid on the initiation fees. "Necessity knows no law" and accounting principles are apt to be forgotten when the sheriff is at the door. Therefore, the purpose of the fee does not always determine its treatment, although it should do so.

The following additional criticism is part of the same topic,

"Mr. Walton incorrectly uses the term 'capital receipts.' Mr. H. C. Bentley correctly defines capital receipts as being money or other evidences of value which are caused by the creation of or addition to fixed liabilities, or the reduction of or realization on fixed assets. Initiation fees are not capital receipts—they are either profits or donated surplus."

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A club has no capital stock and it is not operated for profit. But that does not mean that it has no capital with which to operate, nor that it does not make profits or losses in its operations. Without more or less permanent capital it could not own any fixed assets at all. This capital must be either contributed or earned. At first it must be contributed in the form of initiation or membership fees. These are really the payments of the members to a permanent capital, paid only once, and therefore not an item of operating profit, since only regularly recurring items are included in operating profit and loss. The fact that they are credited to surplus or left in initiation fees account, instead of being credited to capital, does not change their nature.

Finally, Mr. Robinson answers his own criticism, when he says that initiation fees may be donated surplus. Undoubtedly; but he forgets that surplus is capital whether in a club or in an ordinary business corporation. As we have seen, it is the only capital that a club can have. As a logical syllogism,

Paid in capital is a capital receipt;

Paid in or donated surplus is paid in or donated capital;

Ergo, donated surplus is a capital receipt.

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James Martin has resigned the secretaryship of the British Society of Incorporated Accountants and Auditors, which he has held for thirty-three years and has been appointed advisor to the society's council.

Whittlesey & Wythes announce that F. J. Wilson has been admitted to partnership in the firm, which will practise under the firm name of Whittlesey, Wythes & Wilson, 30 Church St., New York.

Lybrand, Ross Bros. & Montgomery announce that Homer N. Sweet, in charge of the Boston office of the firm, has been admitted to membership in the firm as of January 1, 1919.

Frederick W. Squires and Howard Greenman announce the formation of a partnership under the firm name of Squires & Greenman, with offices at 25 Broad street, New York.

Clinton H. Montgomery & Co. announce the admission to the firm of W. E. Baird in charge of the firm's office 712-714 Scarritt building, Kansas City, Missouri.

Marwick, Mitchell, Peat & Co. announce that they have admitted to partnership Thomas Ritchie, James B. Campbell, and Andrew Stewart.

Edward Owen, formerly commissioner of accounts of the city of New York, died of pneumonia, January 18, 1918.

Haas & Carr announce the opening of offices at 613 Pennsylvania building, Philadelphia, Pennsylvania.

A. F. Wagner announces the reopening of his office at 517 Security building, Minneapolis, Minn.

The Journal of Accountancy

Official Organ of the American Institute of Accountants

Vol. 27

APRIL, 1919

No. 4

Rapid Calculation of Compound Interest Processes

By F. C. BELSER

Occasion frequently arises for calculating approximately, but quickly, a present value or a sinking fund instalment when neither mathematical tables nor other aids are available.

Although compound interest processes involve lengthy calculations in order to secure accuracy, it is remarkable how closely many of the results can be obtained in a few seconds without the use of either interest tables or logarithmic tables. In fact, the calculations resolve themselves almost into mental arithmetic.

All that is necessary is to remember that, at all ordinary rates of interest, the number of periods in which money doubles itself is, roughly, the same as the number of times the periodical rate per cent. of interest is contained in 70. That is to say: \$1.00 will amount to \$2.00 in $23\frac{1}{3}$ periods at 3% per period; in $17\frac{1}{2}$ periods at 4%; in 14 periods at 5%; and so on. A closer approximation is secured by dividing 69 by the rate and adding .35. By this method it may be determined that \$1.00 will amount to \$2.00 in

23.35 periods @ 3% $\left(\frac{69}{3} + .35 = 23.35 \right)$; in 17.60 periods @ 4%; in 14.15 periods at 5%; and so on.* The first method of approximation is easier to remember, but the second method gives somewhat more accurate results, particularly with the higher rates of interest. The following table shows in comparative form the actual number of periods required for money to double itself and the relative merits of the two methods of approximation.

*This fact is not a coincidence, but is based on sound mathematical reasons. The formula for the accumulation of money at compound interest is $S = (1 + i)^n$, in

Rate of interest	Actual number of periods required	Approximations	
		$\frac{70}{\text{rate}}$	$\frac{69}{\text{rate}} + .35$
1%	69.6607	70.00	69.35
2	35.0028	35.00	34.85
3	23.4498	23.33	23.35
4	17.6730	17.50	17.60
5	14.2067	14.00	14.15
6	11.8956	11.67	11.85
10	7.2725	7.00	7.25
15	4.9595	4.67	4.95
20	3.8018	3.50	3.80

If the formula $\left(\frac{69.32}{\text{rate}} + .34 \right)$ is used, the results for all rates of interest up to about 20% are obtained correct to two decimal places.

With this rule in mind, we are thus in a position to calculate rapidly the approximate amount to which \$1.00 will accumulate in any given time. Thus, @ 5%, since money doubles itself at this rate in approximately 14.15 periods, we have this result:

\$1.00 will become \$2.00 in 14.15 periods.

\$1.00 will become \$4.00 in 14.15 periods more, or 28.30 periods.

\$1.00 will become \$8.00 in 14.15 periods more, or 42.45 periods.

If the result is desired to, say, 48 periods, correction must be made for 5.55 additional periods, which at 5% is equal to 27.75%. Since it is compound interest that is in question, it is safe to assume an accumulation of a somewhat greater percentage, say 30%. Since 30% of \$8.00 is \$2.40, the result is:

\$1.00 will become \$10.40 in 48 periods.

The mathematically correct result is \$10.40127.

which i is the periodical accumulation on \$1.00, and n the number of periods. Therefore—

$$n = \frac{\log S}{\log (1 + i)}$$

Where i is less than unity—

$$\log_e (1+i) = i - \frac{1}{2} i^2 + \frac{1}{3} i^3 - \frac{1}{4} i^4 \text{ etc.}$$

Since i is very small, the terms of the right hand expression, after the first, rapidly become inconsiderable. Thus if interest is at 5% (that is where $i = .05$) $\log_e (1 + i) = .05 - .00125 + .00004167$, etc.

So that, roughly speaking,

$$n = \frac{\log_e S}{i}$$

This formula is of general application as an approximation so long as i is as small as it is in the case of ordinary interest rates. When money is doubled S of course equals 2, and $\log_e 2$ equals .693147.

Rapid Calculation of Compound Interest Processes

If the result had been required to 40 periods, it would have been necessary to make correction by deducting 2.45 periods @ 5%, or 12.25%. Instead of taking more than the indicated percentage (as was done when adding corrections above), a somewhat smaller percentage should be taken, say 12%. Since 12% of \$8.00 is \$.96, the result is:

\$1.00 will become \$7.04 in 40 periods.

The mathematically correct result is \$7.03999.

It is also necessary to remember a few simple formulæ. These formulæ are not difficult to remember, as they follow a simple logical sequence. They are as follows:

Present value of \$1.00 is equal to	$\frac{1}{\text{amount of \$1.00}}$
-------------------------------------	-------------------------------------

Amount of an annuity of \$1.00 per annum is equal to	$\frac{\text{compound interest on \$1.00}}{\text{rate of interest}}$
--	--

Present value of an annuity of \$1.00 per annum is equal to	$\frac{\text{compound discount on \$1.00}}{\text{rate of interest}}$
---	--

Sinking fund instalment is the reciprocal of the amount of an annuity or	$\frac{\text{rate of interest}}{\text{compound interest on \$1.00}}$
--	--

The premium or discount on a bond is equal to	The present value of an annuity of the difference between the coupon rate and the yield rate
---	--

Since the compound interest is the amount minus the original principal, and since the compound discount is the original principal minus the present value, all the formulæ resolve themselves into variations of the amount at compound interest.

There are, of course, many other formulæ covering interest calculations, but the foregoing are the most important, and those most frequently used.

To illustrate the ease with which these calculations can be made, examples of a few of the more important applications of the formulæ are given below. For clearness, the processes are set out much more fully than is really necessary in practice. It should be observed that in no case are decimals carried out to

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more than two or three places, since nothing is claimed for the calculations except approximately correct results in the absence of mathematical tables. The formula $\left(\frac{69}{\text{rate}} + .35 \right)$ has been used in these examples for determining the period when \$1.00 amounts to \$2.00.

Ex. 1—What is the amount of \$150.00 for 25 years @ 5%?

The first step is to find the amount of \$1.00 for the given period.

\$1.00 will amount to \$2.00 in 14.15 years.

\$1.00 will amount to \$4.00 in 14.15 years more, or 28.30 years all told.

As the amount for only 25 periods is required, it is necessary to deduct 3.30 years @ 5%, say 15% or \$.60.

\$1.00 therefore becomes \$3.40 in 25 years.

The amount of \$150.00 is equal to \$510.00.

True result—\$507.95.

Ex. 2—What is the present value of \$25,000.00 due 30 years hence, at 6% interest?

The formula for the present value is $\frac{1}{\text{amount of \$1.00}}$

It is therefore necessary to first find the amount of \$1.00 for 30 years @ 6%:

\$1.00 will become \$2.00 in 11.85 years.

\$1.00 will become \$4.00 in 11.85 years more, or 23.70 years.

It is necessary to add 6.30 years @ 6% or 37.18%.

As the interest is compound, 42% or 43% may justifiably be taken, say \$1.72.

\$1.00 will therefore become \$5.72 in 30 years.

This result can be proved by carrying the calculation one stage further, viz.:

\$1.00 will become \$8.00 in 23.70 years plus 11.85 years, or 35.55 years.

Here the correction necessary is a deduction of 5.55 years @ 6%, or 33.30%.

Deducting a somewhat smaller percentage, say 28%, or \$2.24:

\$1.00 will therefore become \$5.76 in 30 years.

This result varies only \$.04 from the first above.

Rapid Calculation of Compound Interest Processes

The present value of \$1.00 is then determined thus:

$$\frac{1}{5.76} = \$1.736$$

and the present value of \$25,000.00 is \$4,340.00.

True result—\$4,352.75.

Ex. 3—What is the amount of an annuity of \$1,500.00 for 20 years @ 5%?

Formula applicable $\frac{\text{compound interest}}{\text{rate}}$

In order to determine the compound interest, it is necessary first to determine the amount of \$1.00 for 20 periods @ 5%.

\$1.00 will become \$2.00 in 14.15 years.

To this must be added 5.85 years @ 5%, or 29.2%.

Using a somewhat higher percentage, say 33%, \$1.00 will become \$2.66 in 20 years.

The compound interest is therefore \$1.66, which, divided by the rate of interest, gives \$33.20 as the amount of an annuity of \$1.00.

The amount of an annuity of \$1,500.00 is therefore \$49,800.00.

True result—\$49,598.93.

Ex. 4—What is the value of a leasehold with a rental of \$35,000.00 per annum, having 75 years to run, interest @ 4%?

This problem involves the determination of the present value of an annuity the formula for which is $\frac{\text{compound discount}}{\text{interest rate}}$

In order to determine the compound discount, it is necessary first to determine the present value of \$1.00, which is equal to

$$\frac{1}{\text{amount of \$1.00}}$$

The amount of \$1.00 for 75 periods at 4% is found as follows:

\$1.00 will amount to \$2.00 in 17.60 years.

\$1.00 will amount to \$4.00 in 17.60 years more, or 35.20 years.

\$1.00 will amount to \$8.00 in 17.60 years more, or 52.80 years.

\$1.00 will amount to \$16.00 in 17.60 years more, or 70.40 years.

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To this must be added 4.6 years @ 4%, or 18.4%. Add, say 20%, or \$3.20, then \$1.00 will amount to \$19.20 in 75 years.

The present value is equal to $\frac{1}{19.20}$ or \$.052

and the compound discount is therefore \$1.00 — \$.052, or \$.948.

Using this figure in the original formula, we have $\frac{.948}{.04}$ or \$23.70, for the present value of an annuity of \$1.00 for the period required.

The present value of an annuity of \$35,000.00 therefore equals \$829,500.00

True value—\$828,814.29.

Ex. 5—What is the value of a 5% bond, to yield 4%, maturity 15 years, interest payable semiannually?

The difference between the coupon rate each half year (\$25.00) and the yield rate each half year (\$20.00) is \$5.00, and the premium paid for this bond will represent the present value of an annuity of this difference of \$5.00 payable every interest period for 30 periods, interest being at 2% per period.

The formula for the present value of an annuity is,
$$\frac{\text{compound discount}}{\text{rate}}$$

As in example 4, it is necessary first to determine the amount of \$1.00 for the period, then its present value, and from this its compound discount.

\$1.00 will amount to \$2.00 in 34.85 periods.

From this must be deducted 4.85 periods at 2%, say 9%, or \$.18.

\$1.00 will therefore amount to \$1.82 in 30 periods.

The present value of \$1.00 is equal to $\frac{1}{1.82}$ or \$.549.

The compound discount is therefore \$1.00 — \$.549, or \$.451.

The present value of an annuity of \$1.00 is $\frac{.451}{.02}$ or \$22.55.

Therefore the present value of an annuity of \$5.00 is \$112.75, or the premium on the bond.

This gives as the value of the bond \$1,112.75.

True value—\$1,111.98.

Rapid Calculation of Compound Interest Processes

Ex. 6—What is the value of a 5% bond, to yield 5.75%, maturity 40 years, interest semiannually?

The difference between the coupon and the yield rate every half year is \$3.75, as follows:

Coupon	\$25.00
Yield rate @ 2.875%	28.75
Difference	<u>\$3.75</u>

The discount on the bond will represent the present value of this difference for 80 periods, with interest @ 2.875%.

The calculation is now similar to that in example 5:

\$1.00 will amount to \$2.00 in 24.35 periods.

\$1.00 will amount to \$4.00 in 24.35 periods more, or 48.70 periods.

\$1.00 will amount to \$8.00 in 24.35 periods more, or 73.05 periods.

Add 6.95 periods @ 2.875%, say 21%, or \$1.68.

\$1.00 will amount to \$9.68 in 80 periods.

The present value of \$1.00 is equal to $\frac{1}{9.68}$ or \$.1033.

Therefore the compound discount is .8967.

The present value of an annuity of \$1.00 is therefore

$$\frac{.8967}{.2875} \text{ or } \$31.20.$$

And the present value of an annuity of \$3.75 is \$117.00, which is the discount on the bond.

This makes the value of the bond \$883.00.

True value—\$883.07.

Ex. 7—What sinking fund will it be necessary to set aside annually to extinguish a debt of \$2,000,000 in 20 years @ 5%?

The formula for the sinking fund instalment is

$$\frac{\text{rate}}{\text{compound interest}}$$

The amount of \$1.00 is first determined—

\$1.00 will amount to \$2.00 in 14.15 periods.

Add 5.85 periods @ 5%, or 29.25%.

Using 33% as the increase, or \$.66, \$1.00 will amount to \$2.66 in 20 periods.

The compound interest is therefore \$1.66 and the sinking fund instalment for \$1.00 is $\frac{.05}{1.66}$ or \$.0301.

The sinking fund instalment for \$2,000,000 is then \$60,200.00.
True value—\$60,485.18.

While for all ordinary purposes it is sufficient to remember the formula for the doubling of money, it is interesting to note further extensions of the same principle. Thus: \$1.00 will amount to \$1.50 in as many years as the rate of interest is contained in 41. That is, at 5%, \$1.00 will amount to \$1.50 in 8.2 periods. The formula

$$\left(\frac{40.55}{\text{rate}} + .20 \right)$$

gives the exact number of periods to at least two decimal places for all rates up to over 40% per period.

This added data is frequently useful when the interval from one step to another is too great if the period of doubling only is used. Thus, in example 7:

\$1.00 will amount to \$2.00 in 14.15 periods.

\$1.00 will amount to \$3.00 in 8.20 periods more, or 22.35 periods.

The correction is now a deduction of only 2.35 periods at 5%, say $11\frac{1}{2}\%$ of \$3.00, or \$.345.

\$1.00 will therefore amount to \$2.655 in 20 periods.

This compares with \$2.66 as determined by the first method, and with \$2.65330, the mathematically correct result.

There is no limit to which this principle can be carried; it depends entirely on the efficiency of the individual's memory. It is therefore well to choose for permanent use only those points which one is likely to retain. In the foregoing illustrations the degree of approximation attained depends somewhat on the accuracy with which the allowance for the odd years is estimated, but even if only simple interest is computed for these odd years the results will be sufficiently accurate for many purposes, and experience has fully demonstrated the usefulness of the method herein outlined.

Why Some Cost Systems Fail to Produce Desired Results

BY ARTHUR S. BURTON

During the past ten years the writer has had the opportunity of working out the practical results in a number of cost systems. This experience, together with a good working knowledge of modern accounting methods, has led him to record his views as to why some of the smaller manufacturing organizations fail to get the ideal results as outlined to them when "cost system" is first brought into their business. The following views supported by a number of actual occurrences will readily point out to the reader the drawbacks to be avoided.

LACK OF UNDERSTANDING

When the head of a manufacturing enterprise approaches an accountant or systematizer it is the first duty of the latter to "size up" his client as to his ideas on the cost system he wants—in other words, to find out whether his opinions are based on his technical knowledge of the business or are derived from an accounting standpoint, for two reasons:

1.—If he is a technical man he is apt to be at a loss to understand why certain information and records should be kept at the producing end of the business, and why certain routines should be strictly adhered to (in some cases by the workmen themselves) to enable the cost man to give him the correct data.

2.—If he is not a technical man and looks upon a cost system from a purely accounting viewpoint, a number of questions assert themselves before going ahead with the installation:

First—What information is to be gained from the cost data?

Second—Is the information to be gathered in such a manner as to compare with estimates originally given for contracts in work?

Third—Does he realize that the methods of estimating and cost finding both should cover the same sub-divisions as used in the production data?

Fourth—Is the system to be constructed so as to inform him at any time the condition of the job in hand, so that he may alter his methods of producing should he be running over the cost of a certain operation, or is it merely to give the cost of the job at completion?

Fifth—Is the cost system to be the forerunner of a bonus or piece rate system to be installed later, as the result of the information gained by the cost reports?

Sixth—Does he realize that "red tape" and unnecessary detail must give way to sound practical methods, but at the same time just enough detail must be retained for the checking of the results?

Seventh—Is the present accounting system suitable for a cost system to be interlocked with it, would it require a complete change of present methods, or is the present accounting system in such shape as to render possible an accurate check on a cost system run independently?

Note—The writer does not favor an independent system, although he knows of several instances where it produced excellent results, one particularly where the payroll averaged \$250,000 a year.

Eighth—Does he know that the more detail is required the more help is needed, and through each stage of its workings it requires thought and accuracy of each person involved in making reports? Also would the information gained be worth the expenditure of employing two or three clerks, or can the overhead only stand to be burdened by one man's salary for keeping cost records?

The writer's reason for mentioning the above questions is the fact that in some of the systems with which he has worked the various points have not been made clear to the client at the time of installation, and as a result some very good cost systems have been seriously criticized. In some cases the man who installed the system did not have the amount of credit due him simply because there was a lack of understanding at the very start.

When a busy manager gets to the stage where he feels that his present methods of recording data are not giving him the information he wants, he is apt to look favorably on any improvement which might be outlined to him, without getting down to the fine points as to how it will affect his whole organization—for it will surely have some connection with every department from the head of the concern to the shop boy. A system installed under these conditions will undoubtedly have its drawbacks sooner or later and is responsible in the majority of cases for such statements as—"We know how much it costs us to do a job, but we can't tell what part of the job makes or loses money for us," or

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"We know whether we gain or lose on every job, but when this information reaches us it is too late to remedy any loss," or "Our system tells us just how we stand when a job is completed, but there is no way of comparing the estimate with the cost records except in total figures. Why can't the cost clerk tell us when more material or labor is charged to a particular operation than should be?" or "The cost clerk works mechanically and the records mean nothing to him until the job is complete."

Here is an excellent example to illustrate where a system was criticized in the writer's presence and the fault was very plainly due to the man who installed the system inasmuch as he failed to have the estimating records coöperate with the cost records:

A construction firm in this city which specialized in the construction of roof, sky and vault lights set in reinforced concrete had its cost system arranged as follows:

Expense

- Travelling expense
- Board and lodging
- Petty expense

Labor

- Superintendent
- Centering
- Mason
- Laborers
- Miscellaneous labor

Material

- Lumber and nails
- Steel
- Cement and sand
- Glass
- Joint filler and water proofing
- Oakum
- Miscellaneous

Tools

- Large equipment
- Ropes
- Small tools

Freight and Cartage

- Freight on glass
- Freight on other materials
- Cartage on glass
- Cartage on other materials

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Sublet Work

Overhead

Direct overhead

Indirect overhead

The above sub-divisions were kept on each job and they furnished the president of this particular concern with a good deal of valuable information, but, when one tried to compare the cost with the estimate it was out of the question. The estimate sheet was made up in the following manner:

Details of job with number of square feet of glass area.
Number of cubic feet of cement work, including overhang on ledges, etc.

Expense	\$
Glass required, number units @	\$
Centering	\$
Installation	\$
Freight and cartage	\$
	<hr/>
Total cost	\$
Plus % profit	\$
	<hr/>
Total bid	\$

The above figures were ascertained and worked upon scrap pads which were afterwards destroyed when the total figures were filled in their respective places on the estimate sheet. The expense item covered the expected trips of the construction engineer to the job together with any probable expense in sending New York men to an out-of-town job. The glass item took in the actual cost of the glass required for the job. Centering covered both labor for installing forms and the lumber and nails required, but these were not separated. Installation covered everything else on the job except sublet work which of course was vouched for by an outside estimate. The above system had been in operation for about eighteen months when the writer took hold of it and it took nearly two months and several heated arguments to convince the president, who was also the general manager, that the cost system was right but the estimating data were wrong. Finally the estimating was changed and forms were printed to conform with the cost system, and this overcame the obstacle. It must be pointed out here that no extra work was

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involved in the estimating department, for it was necessary to estimate the various classes of labor and material to reach the bulk figures in the old system.

RED TAPE

One of the greatest drawbacks encountered by the practical cost man is red tape. This alone is responsible for some of the above-mentioned statements as to why the system failed to give the desired result. It is practically out of the question to expect the average mechanic to record petty detail, and 75% of them absolutely refuse to do so. In cases where they are obliged to keep certain records they do so only half-heartedly, with the result that when they are questioned regarding the accuracy of the reports they make they have the old excuse that "they are not bookkeepers." It is very hard, indeed, to find a system in a manufacturing establishment where the cost man does not have to depend to some extent upon the reports turned in from the production end. Where the seat of production is in another town, which frequently happens in building construction, it is very difficult to get some of the most practical construction men to turn in correct reports suitable for the recording of cost data as outlined by the system in use. The average production man is too busy getting the job in hand done, or laying out of his schedule for the following day, to be bothered by unnecessary red tape and petty detail. Consequently after correspondence has passed a feeling of enmity is created which usually ends in the cost records becoming useless.

Then again, hair-splitting records tend to occupy the time of the cost clerks, who could more profitably use a little time in looking over the day's work for comparisons in material used according to labor expended or for reasons why the average cost per unit fluctuates. The writer has always endeavored to set apart some period to check up his records and look for trouble, but where a man's time is taken up in recording petty detail this cannot be accomplished with the same effect. The tendency under these conditions is to make him work on "the more accurate than right basis," and he usually fails to detect the more important fluctuations until some time later.

The following is an instance which will illustrate the unnecessary detail mentioned. A construction house in this city decided

to install a cost system which, theoretically, would answer any question the management might care to ask regarding any of its many out-of-town jobs as the work progressed. Several thousand dollars were expended to install these wonderful tell-tale methods. The plan was outlined to the general manager with the strict understanding that one man could run it comfortably without any trouble whatever. Two months of operation found the cost man with two men and two girls assisting him and drawing total salaries amounting to close on \$7,000 a year, working like slaves from 8:30 a. m. to 5:30 p. m. each day in order to keep up with the work.

One instance will be enough to show the reader why red tape methods kept five people busy on a supposedly one-man system. The correct formula of concrete used was one part cement to three parts sand and gravel. Sand at that time cost about \$1.25 per cubic yard. The weight of a yard of sand averages from 2,700 lbs. to 3,200 lbs. according to its condition as to moisture. The system was outlined to record the cost per pound of sand bought (which, striking an average of 3,000 lbs. to the cubic yard, was .0416c. per lb.) and the number of pounds used each day. This method meant that every cubic yard of sand and gravel worth about \$1.25 per cubic yard had to be converted from cubic yards to pounds and the price calculated to four decimals of a cent per pound—which was all unnecessary, to say nothing of the inaccuracy of the weight, as it was only approximate, there being a difference of about 500 lbs. per cubic yard according to the condition of the sand.

The practical way would have been to record the number of cubic yards purchased and used in terms of cubic yards at so much per cubic yard. The purchase order read cubic yards and the quantities on the estimate sheets referred to cubic yards. Therefore, why go to all this trouble of changing to pounds? Another bad feature was that if one wanted to know how many yards of sand went into the job he had to add up the pounds and divide by the average used. The estimating department did not care about pounds of sand used, but it did want to know how many yards went into the job. These methods of red tape and useless petty detail lasted about six months when the firm went into the hands of a receiver. The whole organization from the general manager to the office boy was fired, with the exception of

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three practised men. Then began the work of building up the business. The old trustworthy cost system was put back, with a few added features. It is now about three years since the receivership was released. The firm has met all its liabilities and has made a substantial profit.

The increased cost of production caused by red tape methods in a cost system is not to be ignored as is shown by the following incident. A large mill on the outskirts of New York employed about 700 men. Of this number about 100 were experienced mechanics who were employed exclusively in the repairing and maintenance of the mill, equipment and machinery. The mill was spread over an area equal to about four city blocks in length and a half a city block in width. The machinery was heavy and in the majority of cases had to be repaired where it was placed. The machine shop, blacksmith shop, tool-room, store-room, etc., were all placed at one end. The cost system provided that "no material was to be given to a mechanic without a written order from his foreman." Breakdowns were very frequent because of the heavy wear and tear on the machines. A hurry call would come over the telephone to repair some trouble, probably at the far end of the mill. Sometimes it would only require a few bolts to put the machine in working order, but for the time being the machine was useless. A mechanic would be sent to do the repairs, but he must first find out what material he needed before he was allowed to obtain it from the stores. After he found out what he needed he had to seek his foreman (who might be at the opposite end of the mill on some other work) to sign the material slip. When that was signed he went to the store-room and received his material. Hundreds of these slips would come up to the cost department with only one bolt on each. Can one imagine the time lost by the men, the idle time of the machine and all the unnecessary labor in the cost department through carrying out a system of this kind?

The writer overcame this by opening a machine shop material overhead account, which was charged with 100 bolts of each size usually kept for that purpose. Records proved in one year that the material overhead account which was charged with various items of this nature showed an expenditure of about \$350 after inventory had been deducted at the end of the year. This amount was charged off to the various machines in proportion to expendi-

tures for both labor and material on each machine for repairs. When one considers that the materials purchased for the upkeep of this mill alone amounted to about \$75,000 per annum, \$350 appears a very small proportion compared with the cost of a machine tied up from 15 to 45 minutes for the sake of a miserable bolt costing about $\frac{3}{4}$ of a cent.

The lesson to be obtained from these experiences is "Comb your cost system for unnecessary detail and red tape."

Another important cause of the failure of a cost system to produce results rests with the man who has charge of the work. Some men who term themselves cost accountants fail in this important work for the simple reason that they do not think it necessary to know much about the work they are doing apart from automatically recording reports which come to them through the various channels of routine. What use is a cost report to an executive if the cost man does not know whether it tells a true story of conditions or not? A successful cost man usually makes it his business to find out how one operation relates to another and posts himself so that he can readily analyze reports from mechanics or foremen. The best way for a man to learn all he can about his system is to insist on being allowed to spend some time at the seat of production and carefully to note the various operations, so that when his reports come in he can picture in his mind what is going on at the plant. In this way he is not only gaining a practical knowledge of the methods of production but he is able to distinguish where the leaks occur and so make himself more valuable to his employers.

For example, take a structural steel shop where steel tanks are being made from $\frac{1}{4}$ inch plates. During 1918 the market for steel plates was very uncertain, and plates needed for a job had to be purchased, in a number of instances, much larger in length and width than was necessary. If one needed a plate 36 inches wide by 50 inches long he probably had to buy one 36 inches by 60 inches long. In this case it would be necessary for the men at the shop to shear or burn 10 inches off the plate. Now, supposing the time clerk reported work on this plate as laying out, punching, etc., and did not report shearing or burning, the cost man who was not familiar with the job operations would not be able to point out that the report was wrong because it did not have time for shearing or burning, while the other operations were charged

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too much as they probably contained the total time on the job. Then again if he made it his business to become familiar with the details of a shop bill or bill of material to compare with his vouchers he would have an excellent check on the purchasing agent to see that the purchase orders were being marked for the correct jobs and would avoid material being charged incorrectly. This would also post him as to whether or not more material was purchased than was necessary for the job. A good many leaks caused by spoiled material can be caught in this particular business if the cost man takes enough interest to learn all he can about a shop bill and a blueprint so far as material is concerned. By following these methods the cost man who is fond of solving problems will find it very interesting work, and gradually he will become anxious to see how his figures compare with those from the estimating and producing ends.

In a number of cases a cost system is looked upon with suspicion by some departments in the organization.

If it is outlined with care to catch the leaks and mistakes of others, the cost man has to be very careful to have his reports correct and to be able to understand and argue with the heads of the departments upon their correctness. For instance, if a salesman or an estimator estimated a job too low, and the cost man could not stand back of his figures and point out that the job was too low, he would have a very poor chance of convincing the head of the business that he was sure of what he was doing. Moreover it would give the other departments a chance to dispute the figures at some future time to cover up their own faults. While on the subject of keeping tabs on the "other fellow's work" it will not be out of place to cite an instance which came to the writer's attention some months ago. A construction firm employed several salesmen. One of their number was considered the final authority when there was keen competition from other firms bidding on the work. In the majority of cases this star salesman brought home the signed contract. Men from the other firms could not understand how he could underbid them as conditions were about equal. It appears that this same man had the superintending of the installation of his jobs. He also furnished a list of material used on each of these jobs to the cost man. The cost man had nothing to guide him as to whether it was right or wrong nor could he read a blueprint. This went on for a number

of months until it came time to take an inventory. It was then found that the stock of material was several thousand dollars short. Upon investigation it was found that the star salesman had installed much more material than his material-used slips called for and he had been putting "one over on the cost man and competitors" all the time. The business changed hands and the man who took it over had no job for this so called "star." He had a system installed whereby he knew what went into a job and how it was estimated.

It seems strange how some men will invest their capital and energies in a business and depend on the organization to make it go for them. Yet there are many doing it today. When failure stares them in the face they realize how much better it would have been to have mapped out a method of procedure at the start to give them definite information as to how they stood as they went along.

The foregoing experiences deal mainly with cost systems in use by firms doing special or specification work such as structural steel, concrete construction and fixtures, where jobs are taken according to plans and specifications. No attempt is made to deal with manufacturing a product for stock or the market.

Any criticism or suggestions regarding these views will be looked upon favorably, as it is from the other fellow's views that knowledge is gained. At any rate, it is the man who actually works the cost system who tends to make it a success or failure and it would be beneficial to the readers of *THE JOURNAL OF ACCOUNTANCY* to hear a little more from the man who actually does the work.

Mathematics of Credit Extension

BY FREDERICK THULIN

In a discussion of credit, from any point of view, a fitting introduction is properly some standard definition of credit.

The now celebrated definition of credit set out by Prof. J. Lawrence Laughlin will bear repetition.

"Credit is a transfer of commodities involving the return of an equivalent at a future time"

or

"Credit is the giving of a present value in exchange for a promise to pay."

The basis of the solidity of the promise to pay is the primary question of credit. This is an elementary statement. If the promise is based on a fundamentally solid foundation, the value may be given; if not, the value may not be given.

Several factors are taken into consideration in passing judgment on the soundness of the promise to pay—the economic, sociological, ethical, legal, mathematical, etc. A credit man obviously is interested in all the elements that are present in an analysis of the soundness of the promise to pay.

The public accountant's point of view is necessarily somewhat more restricted; and as the message of the public accountant is conveyed primarily through the medium of figures, the element of credit mathematics is the element in credit analysis in which the public accountant is most interested and which therefore he should thoroughly understand. Furthermore the mathematical verdict is final to a certain extent and in the major number of instances is the initial question that is considered.

The credit problem and the accountant's relationship to that problem have been given a new significance by the federal reserve board. Seemingly therefore a review of some fundamental principles may not be amiss.

Omitting any consideration of a grant of credit to governmental bodies, values are lent to two classes of borrowers:

To a borrower who or which does use substantial capital in the prosecution of a given business.

To a borrower who or which does not use substantial capital in the prosecution of a given occupation or business.

While the foregoing classification is fundamental and has been recognized by congress as involving differing considerations in fixing a taxing programme, and although the distinction is somewhat significant from the credit point of view, the public accountant is primarily interested in the credit problem when

The borrower is one who or which does use substantial capital in the prosecution of a business.

An enterprise of the foregoing kind has two kinds of credit extended to it. The credit represented by

- a. The fixed creditor indebtedness which is primarily reflected on the debit side by fixed or capital assets.

The fixed creditor liability therefore is functioning as capital or proprietor liability.

- b. The temporary or current indebtedness which is primarily reflected on the debit side by current assets.

The current creditor liability therefore is not functioning as capital or proprietor liability.

a. The fixed liability.

In considering the credit problem involved in the fixed liability a fundamental accounting principle should be kept in mind although it is frequently overlooked: the fixed or capital assets of a business—buildings, machinery equipment, etc.—are to be used in a going business and derive their value by being so used.

While it may be true that in a few instances the auction block or salvage value of fixed assets may be sufficient to secure the fixed creditor in the event of a default, in most cases the auction block or salvage value will not be thus favorable to the creditor. In any event realization and liquidation proceedings are long drawn out and in most instances very expensive. The primary consideration of the fixed creditor therefore is not that of property appraisal but of some other element.

As the fixed indebtedness is not to be eventually paid out of a realization of the sale of the fixed assets, it follows that the indebtedness can only be liquidated from one source, to wit: from the net earnings of the business.

Therefore expressing the thought in a mathematical equation we have

Net earnings for period = adequate sinking fund deposit for period + transfer to surplus.

Mathematics of Credit Extension

Where this equilibrium is not established the necessity arises of funding or refunding the fixed indebtedness—in most instances not a desirable prospect. A possibility of being compelled to renew or extend an indebtedness may bring a business to a receivership.

Whether or not the equation will be maintained throughout the future years until the maturity of the fixed indebtedness is another question and not one for the accountant to answer. The business economist must be called in at this juncture for his opinion.

That the fixed indebtedness may be secured by a mortgage on the fixed assets is somewhat of a last gasp measure of protection and is valuable to the extent of barring equality of participation with other creditors in the realizable assets secured by the mortgage. Any excess of indebtedness takes a ranking equal to the other unsecured indebtedness.

Although the equation may be satisfied it is not necessarily conclusive as to the credit worth of the fixed liability. It may well be that the earnings are sufficient; yet, because of the insufficiency of capital contribution on the part of the proprietorship, the current liability creditors may force a receivership. Logically therefore the fixed liability must be considered with the current liability.

b. The current liability.

The fixed liability being liquidated from earnings it follows logically that the current liability can not be liquidated from earnings. To advance the contrary opinion in regard to the current liability is to advance the principle that the current liability should function as a capital liability, which in turn is to throw a disproportionate burden on profits or sales, the primary source of the profits.

Yet credit men repeatedly affirm that many business men seemingly have this conception of the function of the current liability incurred in the purchase of merchandise, etc., used in the business. It sometimes happens that this equation is present, but not often—

$$\text{net earnings for period} = \text{indebtedness.}$$

The confused thinking on this point, according to Dun's and Bradstreet's statistics, is responsible for many a business failure.

Preliminary to discussing the credit mathematical equation involved in a consideration of the current liability there are some fundamental credit questions that should be kept in mind:

1. The grant of credit should not extend to the sphere that is properly the exclusive field for capital liability. If it does, the business is undercapitalized. If the capital liability goes beyond its sphere, the business is overcapitalized.
2. The amount of capital liability that a business should have is governed primarily by the selling activity. Prima facie the capital contribution to a business can decrease as the selling activity of a business increases, and, conversely, the capital contribution of a business must increase as the selling activity decreases.

The mathematical problem is therefore to determine the point of limitation to which the grant of credit can go and to determine the prima facie amount of capital, if any, the business requires from its proprietorship in reference to the particular request of credit under consideration.

Expressed in the form of an equation we have

The sum of

1. Cash on hand and in bank at the beginning of the credit period. This amount would exclude any sinking fund built up to retire any fixed indebtedness.
2. Estimated liquidation during credit period of quick assets on hand at the beginning of the period, exclusive of inventories. Such quick assets would ordinarily be accounts, notes and bills receivable and in some instances accounts and notes receivable covering advances to officers.
3. Estimated amount to be realized from estimated gross sales during credit period.
This estimated amount includes cash sales to be made during period and amount to be collected during the period from credit sales made during the credit period.
4. Other realizable quick assets that are readily salable, such as mortgages, bonds and stocks.

Minus

1. Expense of doing business during credit period.
2. Sinking fund payments to be made during the period or if not to be made during the period the amount accumulated to and through the credit period pro-rated on an equitable basis to be hereinafter described.
3. Indebtedness incurred prior to the credit period and maturing within the credit period.

Mathematics of Credit Extension

Such indebtedness is clearly a deduction inasmuch as a business should have provided for this liquidation. It should not take care of the indebtedness by a renewal unless for explainable reasons.

Where the indebtedness matures subsequent to the credit period the question arises as to the purpose of the indebtedness.

If the indebtedness were to purchase merchandise currently sold or used the indebtedness should be pro-rated on the basis of monthly cash receipts activity from the inception of the debt and accumulated to the end of the credit period under discussion. To do otherwise is to pay one indebtedness at the expense of another creditor.

If the indebtedness were to purchase merchandise not currently sold or used but sold or used in a season in the future, the credit grant under present consideration would not be liquidated by a substitution of liability and is therefore strictly speaking not an element to be considered for the period. Such a grant of credit would be separately considered for its own period and in line with the same general principles herein discussed.

Also where such indebtedness matures after the credit period and prior to the time the sales activity or use in the merchandise takes place, the amount of such indebtedness should not be pro-rated and accumulated to the end of the credit period under consideration on the basis of monthly percentage of cash receipts, but should likewise be separately considered.

If the current indebtedness were for any general purpose the indebtedness should be pro-rated monthly and accumulated throughout the credit period on the basis of monthly percentage of cash receipts.

4. Estimated indebtedness to be incurred during the credit period and maturing within the credit period. Such an inclusion in the deductions is clearly permissible.

Where such indebtedness matures outside the credit period under consideration and is for the purchase of merchandise currently sold or used, the amount should be pro-rated to the portion of the credit period on the basis of the monthly percentage cash receipts activity of the business.

If such indebtedness is incurred for merchandise not currently sold, which is to be sold at a future time beyond the maturity of the credit period under consideration, the credit is separately considered in conformity with the general principles outlined herein.

Should such obligation mature prior to the season's activity, no portion of the indebtedness should be pro-rated to the present credit period on the basis of monthly receipts activity of

the months falling within the credit period, but should likewise be separately considered.

Any current indebtedness not incurred for merchandise purchases should be pro-rated equally to the period under consideration.

Plus

1. Any indebtedness or expenses taken into consideration in the equation which are to be liquidated from the advance of credit given.

Such a liquidation would not be made from the ordinary credit given for merchandise purchased. Where this element is present it will ordinarily arise from a grant of credit given by a bank.

Equals:

The credit limitation for the period.

When the credit requested which is necessary to the business is in excess of the credit limitation, the business is *prima facie* under-capitalized during the specific period to the extent of the difference. If the reverse condition is true, viz., the credit limitation is in excess of the credit requested, *prima facie* the business is over-capitalized to the extent of such difference. The latter *prima facie* inference may be negated by other elements such as the necessity for the creation of funds for expansion and further development of the business, for meeting specific expenditures of various kinds and other expenditures.

THE SALVAGE VALUE OF ASSETS

The mathematical credit problem discussed in the foregoing paragraphs assumes a going business. This aspect of the credit problem should not be confused with the credit principle which, for want of a better name, might be called the salvage or auction block theory of credit.

A credit rule of thumb that has been given considerable currency is expressed in the following equation:

$$\text{Liquid assets} = \text{liquid liabilities} \times 2 \text{ to } 2\frac{1}{2}.$$

In some instances one finds a tendency to handle a credit problem strictly on this basis. If the equation is satisfied the credit is granted; if not satisfied the credit is not granted.

It is self-evident that a certain grant of credit may well be made on the basis of appraisal values and yet be an undesirable grant of credit. The undesirability is not that eventually there

Mathematics of Credit Extension

will be a loss but that the liquidation may be from a defunct and not from a going business.

In the last analysis the true credit grant creating a current or temporary liability, like the credit grant creating a fixed liability, is primarily predicated on the assumption of a going business and only secondarily predicated on the assumption that the salvage or auction block realizability will satisfy the debt.

SALES ACTIVITY AND PROFITS

As the writer noted, the question of sales activity is closely allied with the question of the capital requirements of a business and thus directly related to the question of the amount of credit that can be extended.

The element of sales activity is also directly related to the profit producing power of a business.

While a grant of credit represented in a current liability can be made in many instances to a business which is making little or no profit or in fact is actually losing money, such a business cannot thus continue indefinitely. A losing business is certainly a red flag in any credit problem.

Every class of business has a certain sales activity. Many businesses of the same kind have respective degrees of sales activity. In any event, the sales activity minus expense of doing business and provisions for retirement of fixed liability = as a minimum a fair profit on capital invested.

When the equilibrium is not present in the foregoing equation such unbalancing may be due to one or more of several causes, in all of which an accountant may be more or less interested.

1. The proprietorship liability may be too heavily reflected in fixed or inventory assets.
2. The fixed or flexible expense of a business may be excessive.
3. The proprietorship liability may be too heavily reflected in accounts, bills or notes receivable or other indebtedness of customers for goods sold—not necessarily in overdue debts, but debts with too long a credit period.
4. The fixed indebtedness and consequently the provision for its retirement is imposing too heavy a burden on profits.
5. The sales are not sufficient in volume. The insufficiency of sales may be due to one or more causes—economic conditions, unsuitable character of the merchandise, poor selling policies, not enough publicity, etc.

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FORMS FOR THE ACCOUNTING COMPILATION OF CREDIT INFORMATION

The form outlined by the federal reserve board in the April, 1917, number of the *Federal Reserve Bulletin*, and also reprinted in the June, 1917, number of THE JOURNAL OF ACCOUNTANCY, cannot very well be improved upon.

Such a balance-sheet constructed in conformity with the suggestions of the board will furnish the requisite information in three important particulars:

1. The value of the assets, particularly the ratio obtaining between the current assets and liabilities.
2. The fixed liability and provisions made for its retirement and whether or not a funding or refunding is necessary.
3. The adequacy of the reserves for depreciation of fixed assets.

The comparative profit and loss form published with the balance-sheet form above mentioned is also a most excellent arrangement for a sound presentation of the elements present in the make-up of a profit and loss statement. Such a statement will give the necessary information relative to the intelligent consideration of

1. The progressive retirement of the fixed liability if any, and
2. The general progress of the business.

As the writer noted it is not enough to know that the assets are on hand or that the business is making money. The third form should set out data whereby some measurement of credit limitation can be made where a request for credit is received.

The following form, while not set out in detail to a point of minuteness, is nevertheless sufficiently suggestive and illustrative of sound principles of credit measurement.

The illustrative case refers to an hypothetical request for credit from a bank of \$5,800 from April 1 to August 18—4 months.

Mathematics of Credit Extension

THE PERCENTAGE TABLE HAS REFERENCE TO A TWELVE MONTH PERIOD. IT IS THE BEGINNING OF THE MONTHLY APPORTIONMENT. TO ILLUSTRATE

A CERTAIN BILL OF GOODS IS PURCHASED IN NOVEMBER. THE CREDIT PERIOD UNDER CONSIDERATION ENDS SEPTEMBER. THE CREDIT PERIOD BEGINS OCTOBER. THE CREDIT PERIOD ENDS OCTOBER. THE CREDIT PERIOD BEGINS NOVEMBER. THE CREDIT PERIOD ENDS NOVEMBER. THE CREDIT PERIOD BEGINS DECEMBER. THE CREDIT PERIOD ENDS DECEMBER. THE CREDIT PERIOD BEGINS JANUARY. THE CREDIT PERIOD ENDS JANUARY. THE CREDIT PERIOD BEGINS FEBRUARY. THE CREDIT PERIOD ENDS FEBRUARY. THE CREDIT PERIOD BEGINS MARCH. THE CREDIT PERIOD ENDS MARCH. THE CREDIT PERIOD BEGINS APRIL. THE CREDIT PERIOD ENDS APRIL. THE CREDIT PERIOD BEGINS MAY. THE CREDIT PERIOD ENDS MAY. THE CREDIT PERIOD BEGINS JUNE. THE CREDIT PERIOD ENDS JUNE. THE CREDIT PERIOD BEGINS JULY. THE CREDIT PERIOD ENDS JULY. THE CREDIT PERIOD BEGINS AUGUST. THE CREDIT PERIOD ENDS AUGUST. THE CREDIT PERIOD BEGINS SEPTEMBER. THE CREDIT PERIOD ENDS SEPTEMBER. THE CREDIT PERIOD BEGINS OCTOBER. THE CREDIT PERIOD ENDS OCTOBER. THE CREDIT PERIOD BEGINS NOVEMBER. THE CREDIT PERIOD ENDS NOVEMBER. THE CREDIT PERIOD BEGINS DECEMBER. THE CREDIT PERIOD ENDS DECEMBER.

THE FOREGOING PRINCIPLE IS APPLICABLE TO EXHIBITS 2, 3, 4 AND 5.

ESTIMATED CASH RECEIPTS AND CASH SECURITIES

1. ESTIMATED CASH SALES FROM APRIL 1918 TO AUGUST 1918.

2. ESTIMATED CASH RECEIPTS FROM COLLECTIONS FROM APRIL 1918 TO AUGUST 1918.

3. ESTIMATED CASH SECURITIES FROM APRIL 1918 TO AUGUST 1918.

4. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1918 TO DECEMBER 1918.

5. ESTIMATED CASH SECURITIES FROM JANUARY 1919 TO APRIL 1919.

6. ESTIMATED CASH SECURITIES FROM MAY 1919 TO AUGUST 1919.

7. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1919 TO DECEMBER 1919.

8. ESTIMATED CASH SECURITIES FROM JANUARY 1920 TO APRIL 1920.

9. ESTIMATED CASH SECURITIES FROM MAY 1920 TO AUGUST 1920.

10. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1920 TO DECEMBER 1920.

11. ESTIMATED CASH SECURITIES FROM JANUARY 1921 TO APRIL 1921.

12. ESTIMATED CASH SECURITIES FROM MAY 1921 TO AUGUST 1921.

13. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1921 TO DECEMBER 1921.

14. ESTIMATED CASH SECURITIES FROM JANUARY 1922 TO APRIL 1922.

15. ESTIMATED CASH SECURITIES FROM MAY 1922 TO AUGUST 1922.

16. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1922 TO DECEMBER 1922.

17. ESTIMATED CASH SECURITIES FROM JANUARY 1923 TO APRIL 1923.

18. ESTIMATED CASH SECURITIES FROM MAY 1923 TO AUGUST 1923.

19. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1923 TO DECEMBER 1923.

20. ESTIMATED CASH SECURITIES FROM JANUARY 1924 TO APRIL 1924.

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22. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1924 TO DECEMBER 1924.

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25. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1925 TO DECEMBER 1925.

26. ESTIMATED CASH SECURITIES FROM JANUARY 1926 TO APRIL 1926.

27. ESTIMATED CASH SECURITIES FROM MAY 1926 TO AUGUST 1926.

28. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1926 TO DECEMBER 1926.

29. ESTIMATED CASH SECURITIES FROM JANUARY 1927 TO APRIL 1927.

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39. ESTIMATED CASH SECURITIES FROM MAY 1930 TO AUGUST 1930.

40. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1930 TO DECEMBER 1930.

41. ESTIMATED CASH SECURITIES FROM JANUARY 1931 TO APRIL 1931.

42. ESTIMATED CASH SECURITIES FROM MAY 1931 TO AUGUST 1931.

43. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1931 TO DECEMBER 1931.

44. ESTIMATED CASH SECURITIES FROM JANUARY 1932 TO APRIL 1932.

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50. ESTIMATED CASH SECURITIES FROM JANUARY 1934 TO APRIL 1934.

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63. ESTIMATED CASH SECURITIES FROM MAY 1938 TO AUGUST 1938.

64. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1938 TO DECEMBER 1938.

65. ESTIMATED CASH SECURITIES FROM JANUARY 1939 TO APRIL 1939.

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68. ESTIMATED CASH SECURITIES FROM JANUARY 1940 TO APRIL 1940.

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71. ESTIMATED CASH SECURITIES FROM JANUARY 1941 TO APRIL 1941.

72. ESTIMATED CASH SECURITIES FROM MAY 1941 TO AUGUST 1941.

73. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1941 TO DECEMBER 1941.

74. ESTIMATED CASH SECURITIES FROM JANUARY 1942 TO APRIL 1942.

75. ESTIMATED CASH SECURITIES FROM MAY 1942 TO AUGUST 1942.

76. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1942 TO DECEMBER 1942.

77. ESTIMATED CASH SECURITIES FROM JANUARY 1943 TO APRIL 1943.

78. ESTIMATED CASH SECURITIES FROM MAY 1943 TO AUGUST 1943.

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83. ESTIMATED CASH SECURITIES FROM JANUARY 1945 TO APRIL 1945.

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85. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1945 TO DECEMBER 1945.

86. ESTIMATED CASH SECURITIES FROM JANUARY 1946 TO APRIL 1946.

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88. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1946 TO DECEMBER 1946.

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97. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1949 TO DECEMBER 1949.

98. ESTIMATED CASH SECURITIES FROM JANUARY 1950 TO APRIL 1950.

99. ESTIMATED CASH SECURITIES FROM MAY 1950 TO AUGUST 1950.

100. ESTIMATED CASH SECURITIES FROM SEPTEMBER 1950 TO DECEMBER 1950.

The Journal of Accountancy

Published monthly for the American Institute of Accountants by
THE RONALD PRESS COMPANY, 20 Vesey Street, New York, N. Y.
Thomas Conyngton, President; L. G. Henderson, Secretary;
Hugh R. Conyngton, Treasurer.

A. P. RICHARDSON,

Editor

EDITORIAL

Release Urgently Needed

Now that the war is nearing its close and the great activities of the emergency are ending, the men from various walks of life who have devoted their services to the winning of the war are beginning to return to civilian occupation—but the process is regrettably slow. Some of the government departments seem to be amazingly reluctant to part with the assistance of men who have been rendering such great help during the crisis. Even the men who volunteered or were drafted for the fighting forces are not being discharged with anything like reasonable speed, but while there may be some excuse for retaining the fighting men until the terms of peace are signed, there certainly can be no excuse whatever for keeping in government employ men who are needed in their civilian vocations and not needed by the government.

Take, for example, the case of accountants. Many of those who volunteered to assist the government and were induced to put on uniform are finding an astonishing procrastination when they apply for release.

Since the beginning of the war it has been a common complaint that, while the government has recognized the value of accounting services and has been ready to admit that accountants have been of the utmost value, many of the men of this profession, once in the government service, have been diverted to work which could be equally well performed by persons of inferior ability. We have heard stories of accountants doing clerical work

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of the most unskilled variety. Others are doing bookkeeping, and, we presume, are doing it remarkably well as the government does not seem to wish to part with such bookkeepers.

One great department of the government some time ago advised the accountants who were working for it that if they wished they might be taken on the permanent staff. This dazzling opportunity was considered by all the men concerned and one or two, with great temerity, ventured to inquire the rank and what compensation would be forthcoming. To this the reply was that they could be taken into the permanent service either at the grade which they then enjoyed or at a lower grade in certain cases.

It did not seem to dawn upon the official mind that the men to whom this offer was made had entered the service at extreme sacrifice. Scarcely one of them did not give up something in the way of income and comfort in order to assist the cause. In many cases the payment received from the government was only a small fraction of the income which would have been received by these men in their ordinary occupations.

There was no protest while the war continued in its active phase; but the time has come when there must be a strenuous protest against continued use of ability to which the government is not entitled. The man who volunteered to help during the emergency was generally led to believe that he would be released at the earliest opportunity. We do not accuse the government departments of acting in bad faith, but there have been instances of unwillingness to release men which are widely at variance with the promises these men received when they were inducted into the service.

We doubt if there is any trade or profession in which there is more demand for men than there is in public accounting to-day. The tremendous pressure due to the federal taxes and the general resumption of normal business is throwing a burden of labor on the accounting offices which is not only unprecedented but overwhelming. There is a limit to the amount of work which a man can do, and most of the accountants are close to that limit. Surely, in the circumstances, the government departments which are retaining in the service men who would be available for accounting work are short-sighted. The collection of revenues is the greatest task before the government to-day, and no man can be of

greater aid than the accountant in the preparation of tax returns upon which revenues will be based.

We urge upon the departments of war and navy to release without further unnecessary delay all those men whose services are so emphatically needed in accounting to-day.

Genuine Service

When the history of accountancy for the past two years comes to be written there will be mention of many prominent accountants who have given up everything at the call of their country. Scarcely an accounting office has escaped the demand for assistance by the government, and few indeed have failed to answer the summons. In some instances the majority of the partners have relinquished everything and have taken up government work. In other cases men have closed their offices in order to be entirely free to devote their attention to the duties which the government thrust upon them.

It would be invidious to claim that any one of these men had done more than the others for the common cause. In some cases the nature of the work done will never be known, and true knowledge of the extent of the sacrifice or the value of the service will remain hidden in official obscurity.

As instances of peculiarly valuable service are available, however, it is quite fitting that attention should be drawn to the facts.

On the 15th of March one of the Institute's prominent members relinquished his office with the government and returned to his professional work after having accomplished a great task. Something of what he did for the government may well be described.

When the income and excess profits tax law of 1917 was enacted a tremendous burden was thrown upon the machinery of the bureau of internal revenue. An organization equipped to deal with revenues of a few hundred millions annually was suddenly required to collect billions under tax laws of great complexity. The situation was made even more difficult by the legislation of 1918, which increased the work of the bureau and made it the most important revenue producing agency of this country—and perhaps of any country in the world.

Editorial

While the bureau had in its service many men of high ability, the increased burden made necessary the appointment of not only a large number of clerks of ordinary ability but also a substantial number of men having the capacity of real leadership.

The problem facing the bureau was further complicated by the fact that attractive offers from business concerns were accepted by men in the service, and there was, as a result, a constant process of depletion which had to be made good by new appointments.

The problem thus presented was two-fold—personnel and organization. Old divisions and sections had to be enlarged and new ones had to be created. Officers and employees had to be considered from the standpoint of their fitness for carrying the increased burdens and performing new services, and the ranks had to be filled from new sources of supply.

At the earnest solicitation of the commissioner of internal revenue, Homer S. Pace went to Washington in September, 1918, and in six months' time evolved a plan of organization which will furnish a working basis for the bureau. He largely increased the personnel and, what is perhaps even more important, he established within the bureau itself courses of training in accounting and income tax practice which will at once enable the bureau better to perform this work and make possible the developing of individual employees so that they will be fitted for the promotion which, in view of the conditions confronting the bureau, awaits all who are capable of performing larger service.

In his work Mr. Pace displayed a broad vision of the problem. To the solution of the problem he devoted an immense amount of energy and of resourcefulness. It is greatly to be regretted from the bureau's point of view that he could not be retained in the service for a longer period, but he completed in a highly creditable manner the work he set out to do and is entitled to great commendation.

As other men leave the service of the government we trust it will be possible to review briefly the things which they have done for the cause. Naturally, the work of some will be more spectacular than that of others, but everyone who served the country to the best of his ability deserves the highest praise and glory without consideration of the exact nature of the service to which he was called.

Income Tax Department

(EDITED BY JOHN B. NIVEN, C.P.A.)

The revenue act of 1918, which, so far as it relates to income and war profits taxes, was published in the March number, has now been supplemented by the issue of new forms and departmental regulations. The forms themselves are adequately designed and profusely instructed, and should by themselves either simplify the preparation of the returns or point out the need of reference to regulations or procurement of expert advice in involved cases. The regulations for all classes of taxpayers have now been consolidated in what are known as regulations 45, which supersede the old regulations 33 and 41. The regulations are divided into four parts, dealing successively with individuals, corporations, administrative provisions and definitions and general provisions. Each part being prefaced by a list of contents systematically arranged in the order of the relevant sections of the law, information on any topic is readily located. The regulations may be obtained from any collector of internal revenue, but are too extensive for full repetition here. We do, however, print the table of contents to show the range of subjects covered, and (indicated by italics in the table of contents) such extracts from the text of the regulations as seem to us to embody fundamental principles which are of most general concern but are not part of the statute itself or set forth in the forms.

The taxation at 1918 rates of all cash dividends received in 1918 has occasioned considerable discussion since the passage of the law. The justification from the statute may be summarized as follows: because dividends are, by section 213 (a), included in income, and because no provision is found in the law for taxing them at rates different from those applied to other income (except for the stock dividends referred to in section 201 (d)), therefore cash dividends are taxable at the rates for the years when received as income, and only stock dividends falling within the period between January 1 and November 1, 1918, are apportionable for taxation at the rate for the years when earned. It follows that section 201 (e), declaring distributions received in the first sixty days of any taxable year to have been drawn from the profits of preceding taxable years is important only in its apportionment of stock dividends for taxation and in its bearing on the relation of all dividends to the initial invested capital for any year.

There are several treasury decisions published herewith, one (T. D. 2794) giving comprehensive rulings on how to distinguish a non-resident alien from a resident alien under all conditions. The others are timely rulings in regard to the time for filing returns and making payments under various conditions created by the late passage of the new law, its retro-active effect on taxes already paid on returns previously filed and so forth.

Income Tax Department

REGULATIONS 45 RELATING TO THE INCOME TAX AND WAR PROFITS AND EXCESS PROFITS TAX UNDER TITLES II AND III OF THE REVENUE ACT OF 1918.

Part I. Income tax on individuals (*Sections 210-228*)

II. Income tax and war profits and excess profits tax on corporations

A. Income tax (*Sections 230-241*)

B. War profits and excess profits tax (*Sections 300-327*)

III. Administrative provisions (*Sections 250-261*)

IV. Definitions and general provisions (*Sections 1-206; 1303-1408*)

(The section numbers refer to the statute and the article numbers to the regulations. Subjects italicized are articles printed in full or abbreviated in the following pages.)

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24. *Methods of accounting*

25. Accounting period.

26. Change in accounting period

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32. Compensation for personal services

33. *Long term contracts*

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49. Application for replacement fund

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PART I.

INCOME TAX ON INDIVIDUALS

Art. 21. Meaning of net income.—Tax imposed by the statute is upon income. In the computation of the tax various classes of income must be considered: (a) Income (in the broad sense), meaning all wealth which flows in to the taxpayer other than as a mere return of capital. It includes the forms of income specifically described as "gains and profits," including gains derived from the sale or other disposition of capital assets. It is not limited to cash alone, for the statute recognizes as income-determining factors other items, among which are inventories, accounts receivable, property exhaustion and accounts payable for expenses incurred. See sections 202 (a), 213 (a), and 214 (a) of the statute. (b) Gross income, meaning income (in the broad sense) less income which is by statutory provision or otherwise exempt from the tax imposed by the statute. See section 213. (c) Net income, meaning gross income less statutory deductions. The statutory deductions are in general, though not exclusively, expenditures, other than capital expenditures, connected with the production of income. See sections 214 and 215 (d) Net income less credits. See section 216 and articles 301-305. The surtax is imposed upon net income; the normal tax upon net income less credits. *Though taxable net income is wholly a statutory conception it follows, subject to certain modifications as to exemptions and as to*

some of the deductions, the lines of commercial usage. Statutory "net income" is, subject to those modifications, commercial "net income." This appears from the fact that ordinarily it is to be computed in accordance with the method of accounting regularly employed in keeping the books of the taxpayer. For instances in which net income is not to be computed in accordance with the taxpayer's method of accounting see articles 22 and 23. As to net income of corporations see sections 232-236 of the statute.

Art. 22. Computation of net income.—Net income must be computed with respect to a fixed period. Ordinarily that period is twelve months and is known as the "taxable year." Items of income and of expenditures which as gross income and deductions are elements in the computation of net income need not be in the form of cash. It is sufficient that such items, if otherwise properly included in the computation, can be valued in terms of money. *The time as of which any item of gross income or any deduction is to be accounted for must be determined in the light of the fundamental rule that the computation shall be made in such a manner as clearly reflects the taxpayer's income.* If the method of accounting regularly employed by him in keeping his books clearly reflects his income, it is to be followed with respect to the time as of which items of gross income and deductions are to be accounted for. If the taxpayer does not regularly employ a method of accounting which clearly reflects his income, the computation shall be made in such manner as in the opinion of the commissioner clearly reflects it.

Art. 23. Bases of computation.—Approved standard methods of accounting will ordinarily be regarded as clearly reflecting income. A method of accounting will not, however, be regarded as clearly reflecting income unless all items of gross income and all deductions are treated with reasonable consistency. See section 200 of the statute for definitions of "paid," "paid or accrued," and "paid or incurred." All items of gross income shall be included in the gross income for the taxable year in which they are received by the taxpayer, and deductions taken accordingly, unless in order clearly to reflect income such amounts are to be properly accounted for as of a different period. See section 213 of the statute. *A taxpayer is deemed to have received items of gross income which have been credited or made available to him without restriction.* On the other hand, appreciation in value of property is not even an accrual of income to a taxpayer prior to the realization of such appreciation through conversion of the property.

Art. 24. Methods of accounting.—It is recognized that no uniform method of accounting can be prescribed for all taxpayers, and the law contemplates that each taxpayer shall adopt such forms and systems of accounting as are in his judgment best suited to his purpose. Each taxpayer is required by law to make a return of his true income. He must, therefore, maintain such accounting records as will enable him to do so. See section 1305 of the statute and article 1711. Among the essentials are the following:

(1) In all cases in which the production, purchase or sale of merchandise of any kind is an income-producing factor inventories of the merchandise on hand (including finished goods, work in process, raw materials and supplies) should be taken at the beginning and end of the year and used in computing the net income of the year;

(2) Expenditures made during the year should be properly classified as between capital and income, that is to say that expenditures for items of plant, equipment, etc., which have a useful life extending substantially beyond the year should be charged to a capital account and not to an expense account; and

(3) In any case in which the cost of capital assets is being recovered through deductions for wear and tear, depletion or obsolescence any expenditure (other than ordinary repairs) made to restore the property or

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prolong its useful life should be charged against the property account or the appropriate reserve and not against current expenses.

Art. 31. What included in gross income.—Gross income includes in general compensation for personal service, professional and business income, profits from sales of property, interest, rent, dividends, and gains, profits and income derived from any source whatever, *unless exempt from tax by law*. Profits derived from sales in foreign commerce are taxable. Income may be in the form of cash or of property. See sections 201 and 202 of the statute and articles 1541-1548 and 1561-1567.

Art. 33. Long term contracts.—Persons engaged in contracting operations, who have uncompleted contracts, in some cases perhaps running for periods of several years, will be allowed to prepare their returns so that the gross income will be arrived at *on the basis of completed work*; that is, on jobs which have been finally completed any and all moneys received in payment will be returned as income for the year in which the work was completed. If the gross income is arrived at by this method, the deduction from gross income should be limited to the expenditures made on account of such completed contracts. *Or* the percentage of profit from the contract may be estimated *on the basis of percentage of completion*, in which case the income to be returned each year during the performance of the contract will be computed upon the basis of the expenses incurred on such contract during the year; that is to say, if one-half of the estimated expenses necessary to the full performance of the contract are incurred during one year, one-half of the gross contract price should be returned as income for that year. Upon the completion of a contract if it is found that as a result of such estimate or apportionment the income of any year or years has been overstated or understated, the taxpayer should file amended returns for such year or years.

Art. 36. Sale of stock.—When shares of stock in a corporation are sold from lots purchased at different times and at different prices and the identity of the lots can not be determined, the *stock sold shall be charged against the earliest purchases of such stock*. The excess of the amount realized on the sale over the cost of the stock, or its fair market value as of March 1, 1913, if purchased before that date, will be the profit to be accounted for as income.

Art. 39. Sale of personal property on the installment plan.—Dealers in personal property ordinarily sell either for cash, or on the personal credit of the buyer, or on the installment plan. The general purpose and effect being the same in all plans, it is desirable that a uniformly applicable rule be established. The rule prescribed is that *in the sale or contract for sale of personal property on the installment plan, whether or not title remains in the vendor until the property is fully paid for, the income to be returned by the vendor will be that proportion of each installment payment which the gross profit to be realized when the property is paid for bears to the gross contract price*.

Art. 40. Sale of real estate in lots.—Where a tract of land is purchased with a view to dividing it into lots or parcels of ground to be sold as such, the entire value as of March 1, 1913, or cost, if acquired subsequently to that date, shall be equitably apportioned to the several lots or parcels and made a matter of record in the books of the taxpayer, to the end that any gain derived from the sale of any such lots or parcels may be returned as income for the year in which the sale was made. This rule contemplates that *there will be a measure of gain or loss in every lot or parcel sold*, and does not contemplate that the capital invested in the entire tract shall be extinguished before any taxable income shall be returned. The sale of each lot or parcel will be treated as a separate transaction and the gain or loss will be accounted for accordingly.

Art. 105. Compensation for personal services.—Among the ordinary and necessary expenses paid or incurred in carrying on any trade or busi-

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ness may be included a reasonable allowance for salaries or other compensation for personal services actually rendered. *The test of deductibility in the case of compensation payments is whether they are reasonable and are in fact payments purely for services.*

Art. 107. Bonuses to employees.—Gifts or bonuses to employees will constitute allowable deductions from gross income when such payments are made in good faith and as additional compensation for the services actually rendered by the employees, provided such payments, when added to the stipulated salaries, do not exceed a reasonable compensation for the services rendered. Donations made to employees and others, which do not have in them the element of compensation or are in excess of reasonable compensation for services, are considered gratuities and are not deductible from gross income.

Art. 108. Pensions.—Amounts paid for pensions to retired employees or to their families or others dependent upon them, or on account of injuries received by employees, and lump sum amounts paid as compensation for injuries are proper deductions as ordinary and necessary expenses.

Art. 109. Rentals.—Where a leasehold is acquired for a specified sum, the purchaser may take as a deduction in his return an aliquot part of such sum each year, based on the number of years the lease has to run. Taxes paid by a tenant to or for a landlord for business property are additional rent and constitute a deductible item to the tenant and taxable income to the landlord, the amount of the tax being deductible by the latter. The cost of erecting buildings or permanent improvements on ground leased by a taxpayer is additional rental and is therefore a proper deduction from gross income, provided such buildings and improvements under the terms of the lease revert to the owner of the ground at the expiration of the lease. In such a case the cost will be prorated according to the number of years constituting the term of the lease. The lessee will not be permitted to deduct from gross income any depreciation with respect to such buildings, but the cost of incidental repairs necessary to keep them in an efficient condition for the purposes of their use may be deducted. If, however, the life of the improvement is less than the life of the lease, depreciation may be taken by the lessee instead of treating the cost as rent.

Art. 111. Time for deduction of charges.—*Each year's return, so far as practicable, both as to gross income and deductions therefrom, should be complete in itself, and taxpayers are expected to make every reasonable effort to ascertain the facts necessary to make a correct return. The expenses, liabilities, or deficit of one year can not be used to reduce the income of a subsequent year.* A person making returns on an accrued basis has the right to deduct all authorized allowances, whether paid in cash or set up as a liability, and it follows that if he does not within any year pay or accrue certain of his expenses, interest, taxes, or other charges, and makes no deduction therefor, he can not deduct from the income of the next or any subsequent year any amounts then paid in liquidation of the previous year's liabilities. A loss from theft or embezzlement occurring in one year and discovered in another is deductible only for the year of its occurrence. Any amount paid pursuant to a judgment or otherwise on account of damages for personal injuries, patent infringement, or otherwise, is deductible from gross income when the claim is liquidated or put in judgment or actually paid, less any amount of such damages as may have been compensated for by insurance or otherwise. If subsequently thereto, however, a taxpayer has for the first time ascertained the amount of a loss sustained during a prior taxable year and not deducted from the gross income therefor, he may render an amended return for such preceding taxable year, including such amount of loss in the deductions from gross income, and may file a claim for refund of the excess tax paid by reason of the failure to deduct such loss in the original return. See section 252 of the statute and articles 1031-1036.

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Art. 121. Interest paid or accrued within the year *on indebtedness* may be deducted from gross income. But interest on indebtedness incurred or continued to purchase or carry securities, such as municipal bonds, the interest upon which is exempt from tax, is not deductible. However, this *exception does not apply to obligations of the United States issued after September 24, 1917, which include the Liberty bonds of the second and subsequent issues*, and interest on indebtedness incurred to purchase such obligations is deductible pursuant to the general rule. Payments made for Maryland or Pennsylvania ground rents are not deductible as interest.

Art. 122. Interest on capital.—Interest calculated as being a charge against income *on account of capital or surplus invested* in the business, but which does not represent a payment on an interest-bearing obligation, is *not* an allowable deduction from gross income; that is to say, the interest which the money might earn if otherwise invested is not a deductible charge against income.

Art. 143. Extraordinary obsolescence.—*When through some change in business conditions the usefulness in the business of some or all of the capital assets is suddenly terminated, so that the taxpayer discontinues the business or discards such assets permanently from use in the business, he may claim as a loss for the year in which he takes such action the difference between the cost or value as of March 1, 1913, of any asset so discarded (less any depreciation allowances) and its salvage value remaining.* This exception to the rule requiring a sale or other disposition of property in order to establish a loss requires proof of some unforeseen cause by reason of which the property must be prematurely discarded, as, for example, where machinery or other property must be replaced by a new invention, or where an increase in the cost of or other change in the manufacture of any product makes it necessary to abandon such manufacture, to which special machinery is exclusively devoted, or where new legislation directly or indirectly makes the continued profitable use of the property impossible. This exception does not extend to a case where the useful life of property terminates solely as a result of those gradual processes for which depreciation allowances are authorized. *It does not apply to inventories or to other than capital assets.* The exception applies to buildings only when they are permanently abandoned or permanently devoted to a radically different use, and to machinery only when its use as such is permanently abandoned. Any loss to be deductible under this exception must be charged off on the books and fully explained in returns of income. This article is not intended to cover cases calling for the application of articles 181-187.

Art. 144. Shrinkage in securities and stocks.—A person possessing securities, such as stocks and bonds, can not deduct from gross income any amount claimed as a loss on account of the shrinkage in value of such securities through fluctuation of the market or otherwise. The loss allowable in such cases is that actually suffered when the securities mature or are disposed of. See, however, article 154. In the case of banks or other corporations which are subject to supervision by state or federal authorities, and which in obedience to the orders of such supervisory officers charge off as losses amounts representing an alleged shrinkage in the value of property, the amounts so charged off do *not* constitute allowable deductions. The foregoing applies only to owners and investors, and *not to dealers* in securities, as to whom see article 1585. However, if stock of a corporation becomes worthless, its cost or its fair market value as of March 1, 1913, if acquired prior thereto, may be deducted by the owner in the taxable year in which the stock was ascertained to be worthless and charged off, provided a satisfactory showing of its worthlessness be made as in the case of bad debts. See article 151.

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Art. 151. Bad debts.—Accounts merely written down and debts recognized as worthless prior to the beginning of the taxable year are not deductible. *Where all the surrounding and attendant circumstances indicate that a debt is worthless and uncollectible and that legal action to enforce payment would in all probability not result in the satisfaction of execution on a judgment*, a showing of these facts will be sufficient evidence of the worthlessness of the debt for the purpose of deduction. Bankruptcy may or may not be an indication of the worthlessness of the debt, and actual determination of worthlessness in such a case is sometimes possible before and at other times only when a settlement in bankruptcy shall have been had. Where a taxpayer ascertained a debt to be worthless and charged it off in one year, the mere fact that bankruptcy proceedings instituted against the debtor are terminated in a later year confirming the conclusion that the debt is worthless will not authorize shifting the deduction to such later year. In the case of debts existing prior to March 1, 1913, only their value on that date may be deducted upon subsequently ascertaining them to be worthless.

Art. 153. Worthless mortgage debt. — Where under foreclosure a mortgagee buys in the mortgaged property and credits the indebtedness with the purchase price, the difference between the purchase price and the indebtedness will *not* be allowable as a deduction for a bad debt, for the property which was security for the debt stands in the place of the debt. *The determination of loss in such a situation is deferred until the property is disposed of.* Only where a purchaser for less than the debt is another than the mortgagee may the difference between the debt and the net proceeds from the sale be deducted as a bad debt.

Art. 154. Worthless securities.—Where bonds purchased before March 1, 1913, depreciated in value between the date of purchase and that date, and were in a later year ascertained to be worthless and charged off, the owner is entitled to a deduction in that year equal to the value of the bonds on March 1, 1913. Bonds purchased since February 28, 1913, *when ascertained to be worthless, may be treated as bad debts* to the amount actually paid for them, but not exceeding their amortized value if purchased at a premium. Bonds of an insolvent corporation secured only by a mortgage from which on foreclosure nothing is realized for the bondholders are regarded as ascertained to be worthless not later than the year of the foreclosure sale, and no deduction for a bad debt is allowable in computing a bondholder's income for a subsequent year. To authorize a deduction for a bad debt on account of notes held prior to March 1, 1913, their value on that date must be established.

DEDUCTIONS ALLOWED: DEPRECIATION. (Sec. 214, a-8.)

Art. 161. Depreciation.—A reasonable allowance for the exhaustion, wear and tear, and obsolescence of property used in the trade or business may be deducted from gross income. The *proper allowance* for such depreciation of any property used in the trade or business is *that amount which should be set aside for the taxable year in accordance with a consistent plan by which the aggregate of such amounts for the useful life of the property in the business will suffice, with the salvage value, at the end of such useful life to provide in place of the property its cost, or its value as of March 1, 1913, if acquired by the taxpayer before that date.*

Art. 166. Method of computing depreciation allowance.—*The capital sum to be replaced should be charged off over the useful life of the property either in equal annual installments or in accordance with any other recognized trade practice, such as an apportionment of the capital sum over units of production.* Whatever plan or method of apportionment is adopted must be reasonable and should be described in the return.

Art. 167. Modification of method of computing depreciation.—If it develops that the useful life of the property has been underestimated, the

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plan of computing depreciation should be modified and *the balance of the cost of the property, or its fair market value as of March 1, 1913, not already provided for through a depreciation reserve, should be spread over the estimated remaining life of the property.* A taxpayer who in computing depreciation allowances in returns for years prior to 1918 has not taken ordinary obsolescence into consideration may for the year 1918 and subsequent years revise the estimate of the useful life of any property so as to allow for such future obsolescence as may be expected from experience to result from the normal progress of the art. No modification of the method should be made on account of changes in the market value of the property from time to time, such as, on the one hand, loss in rental value of buildings due to deterioration of the neighborhood, or, on the other, appreciation due to increased demand. The conditions affecting such market values should be taken into consideration only so far as they affect the estimate of the useful life of the property.

Art. 170. Charging off depreciation.—A depreciation allowance, in order to constitute an allowable deduction from gross income, *must be charged off.* The particular manner in which it shall be charged off is not material, except that the amount measuring a reasonable allowance for depreciation must be either deducted directly from the book value of the assets or preferably credited to a depreciation reserve account, which must be reflected in the annual balance-sheet. The allowances should be computed and charged off with express reference to specific items, units, or groups of property, each item or unit being considered separately or specifically included in a group with others to which the same factors apply. The taxpayer should keep such records as to each item or unit of depreciable property as will permit the ready verification of the factors used in computing the allowance for each year for each item, unit or group.

Art. 181. Property the cost of which may be amortized.—The taxpayer may make a reasonable deduction from gross income not in excess of a sum sufficient to extinguish the cost of buildings, machinery, equipment, or other facilities constructed, erected, installed, or acquired on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war, and of vessels constructed or acquired on or after such date for the transportation of articles or men contributing to the prosecution of the present war. A deduction on account of amortization will be allowed only in the case of enterprises or projects falling within the class of activities contributing to the prosecution of the present war. See also section 204 of the statute and articles 1601-1603.

PART I—INCOME TAX ON INDIVIDUALS

Art. 182. Cost which may be amortized.—The total amount to be extinguished by amortization is *the difference between the original cost to the taxpayer of the property and its value to the taxpayer at the close of the amortisation period (a) for sale or (b) for use, immediate or prospective, as part of the plant or equipment of a going business, whichever value is the larger, less any amounts otherwise deducted or deductible for wear, tear, obsolescence and loss.* In the case of property the construction or installation of which was commenced before April 6, 1917, and completed subsequently to that date, amortization will be allowed with respect only to the cost incurred on or after April 6, 1917.

Art. 183. Amortization period.—The period over which the deduction allowed is to be spread, or during which it is to be amortized, is the estimated period between the date of acquisition or completion of the property and the date upon which either (a) the property will become useless or (b) the taxpayer will be able to earn by operation or use a normal return upon the unamortized cost, whichever date is the earlier.

Art. 184. Method of amortization.—The proportion of allowable deduction to be allocated to each taxable year of the amortization period will be,

as nearly as may be determined, the same proportion which the net income or profit derived during such taxable year bears to the entire net income or profit derived during the amortization period from the operation or use of such property.

Art. 185. Additional requirements for amortization.—Claims for amortization must be unmistakably differentiated in the return from all other claims for wear, tear, obsolescence, and loss. No such claim will be allowed unless it is reflected in any accounts submitted by the taxpayer to stockholders and in any credit statements by the taxpayer to banks, and is given full effect on his financial books of account.

Art. 201. Depletion of mines, oil and gas wells.—A reasonable deduction from gross income for the depletion of natural deposits and for the depreciation of improvements is permitted, based (a) upon cost, if acquired after February 28, 1913, or (b) upon the fair market value as of March 1, 1913, if acquired prior thereto, or (c) upon the fair market value within 30 days after the date of discovery in the case of mines, oil and gas wells discovered by the taxpayer after February 28, 1913, where the fair market value is materially disproportionate to the cost. The essence of this provision is that *the owner of such property, whether it be a leasehold or freehold, shall secure through an aggregate of annual depletion and depreciation deductions a return of the amount of capital invested* by him in the property, or in lieu thereof an amount equal to the fair market value as of March 1, 1913, of the properties owned prior to that date, or an amount equal to the fair market value within 30 days after the date of discovery of mines, oil or gas wells discovered by the taxpayer on or after March 1, 1913, and not acquired as the result of purchase of a proven tract or lease, where the fair market value of the property is materially disproportionate to the cost; plus in any case the subsequent cost of plant and equipment (less salvage value), and underground and overground development, which is not chargeable to current operating expense, but not including land values for purposes other than the extraction of minerals. Operating owners, lessors, and lessees are entitled to deduct an allowance for depletion, but a stockholder in a mining or oil or gas corporation is not.

Art. 227. Depletion of timber.—A reasonable deduction from gross income for the depletion of timber and for the depreciation of improvements is permitted, based (a) upon cost if acquired after February 28, 1913, or (b) upon the fair market value as of March 1, 1913, if acquired prior thereto. The essence of this provision is that *the owner of timber property, whether it be a leasehold or a freehold, shall secure through an aggregate of annual depletion and depreciation deductions a return of the amount of capital invested* by him in the property, or in lieu thereof an amount equal to its fair market value as of March 1, 1913, plus in any case the subsequent cost of plant, equipment, and development which is not chargeable to current operating expenses, but not including cut-over land values.

DEDUCTIONS ALLOWED: LOSS IN INVENTORY (Sec. 214, a-12)

Art. 261. Loss in value of inventory.—Losses under this paragraph relate only to a redetermination of the value of inventories taken at the close of the taxable year 1918. Such redetermination of value may be made (a) before the date of filing a return for that year, in which case the claim should be filed with the return, or (b) if no such claim is filed with the return, a claim may be filed subsequently thereto with the collector. Each claim should state the name and address of the taxpayer and should contain a concise statement of the amount of the loss sustained and the basis upon which it has been computed, together with all pertinent facts necessary to enable the commissioner to determine the allowability of the claim. Each claim should be supported by an affidavit,

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and after one claim has been allowed no further claim can be considered. To be allowed such inventory loss must be substantial in amount and represent either (a) a realization by sale of goods taken in the inventory or (b) a shrinkage in market price (and such shrinkage must show sound evidence of permanency) of goods taken in the inventory and unsold at the date of the claim. In determining whether a loss has been realized by the sale of goods taken in the inventory, all sales made subsequent to the date of the inventory will be deemed to have been made from the inventoried stock until such inventoried stock is exhausted. No claim will be allowed for any loss of anticipated profits.

Art. 431. Return when accounting period changed.—*No return can be made for a period of more than 12 months.* A separate return for a fractional part of a year is therefore required wherever there is a change, with the approval of the commissioner, in the basis of computing net income or wherever a taxpayer makes his first return of income on the basis of a fiscal year.

TIME AND PLACE FOR FILING RETURN (Sec. 227)

Art. 441. Time for filing return.—Returns of income must be made on or before the fifteenth day of March following the taxable year, except that returns on the basis of a fiscal year other than the calendar year must be made on or before the fifteenth day of the third month following the close of the fiscal year.

PART II A.

INCOME TAX ON CORPORATIONS.

TAX ON CORPORATIONS (Sec. 230).

Art. 531. Net income.—*The net income of corporations is determined in general in the same manner as the net income of individuals, but the deductions allowed corporations are not precisely the same as those allowed individuals.* See sections 233, 234 and 235 of the statute. The net income of corporations is computed on the same basis as to accounting periods as the net income of individuals. See sections 212 and 226 and articles 21-26 and 431.

Art. 541. Gross income.—*The gross income of a corporation for the purpose of the tax in general includes and excludes the same things as the gross income of an individual.*

Art. 542. Sale of capital stock.—*The proceeds from the original sale by a corporation of its shares of capital stock, whether such proceeds are in excess of or less than the par value of the stock issued, constitute the capital of the company. If the stock is sold at a premium, the premium is not income. Likewise, if the stock is sold at a discount, the amount of the discount is not a loss deductible from gross income. If, for the purpose of enabling a corporation to secure working capital or for any other purpose, the stockholders donate or return to the corporation to be resold by it certain shares of stock of the company previously issued to them, the sale of such stock will be considered a capital transaction and the proceeds of such sale will be treated as capital and will not constitute income of the corporation. If, however, treasury stock, meaning stock previously issued by the corporation and repossessed by it through purchase or otherwise and then carried on its books as an asset, is resold at a price in excess of its cost or value upon repossession, such excess shall be returned as income for the year in which resold. Unissued stock is not treasury stock. A corporation realizes no gain or loss from the purchase of its own stock.*

Art. 543. Contributions by stockholders.—Where a corporation requires additional funds for conducting its business and obtains such needed

money through voluntary pro rata payments by its stockholders, the amounts so received being credited to its surplus account or to a special capital account, such amounts will *not* be considered income, although there is no increase in the outstanding shares of stock of the corporation. The payments in such circumstances are in the nature of voluntary assessments upon, and represent an additional price paid for, the shares of stock held by the individual stockholders, and will be treated as an addition to and as a part of the operating capital of the company. The cancellation by a stockholder of indebtedness owing from the corporation usually has the effect of increasing the capital and surplus of the corporation and not of producing income. See articles 838 and 860.

Art. 544. Sale of capital assets.—Where property is acquired and later sold for a higher price, the gain on the sale is income

Art. 561. Allowable deductions.—*In general the deductions from gross income allowed corporations are the same as allowed individuals, except that corporations may deduct dividends received from other corporations subject to the tax and may not deduct charitable contributions, and that insurance companies are permitted special deductions.* See section 214 of the statute. Particularly, as to business expenses see articles 101-112; as to interest paid see articles 121 and 122; as to taxes paid see articles 131-134; as to losses see articles 141-145; as to bad debts see articles 151-154; as to depreciation see articles 161-172; as to amortization see articles 181-187; as to depletion see articles 201-233; and as to loss in inventory see article 261.

Art. 562. Donations.—Donations made by a corporation for purposes connected with the operation of its business, when limited to charitable institutions, hospitals or educational institutions conducted for the benefit of its employees or their dependents, are a proper deduction as ordinary and necessary expenses.

Art. 564. Effect of tax-free covenant in bonds.—Corporations may deduct taxes from gross income to the same extent as individuals, except that in the case of corporate bonds or obligations containing a tax-free covenant clause, the corporation paying a tax, or any part of it, whether federal, state or otherwise, for some one else pursuant to its agreement is not entitled to deduct such payment from gross income on any ground.

Art. 566. Discount on corporate bonds.—Where a corporation sells its bonds at a discount, the amount of such discount, together with any commission for selling and other expenses incidental to issuing the bonds, constitutes a loss which should be prorated over the life of the bonds sold. The amount thus apportioned to each year will be deductible from the gross income of each such year until the bonds shall have been paid or redeemed. See article 848.

Art. 567. Retirement of corporate bonds.—Where a corporation under the terms of its indenture securing an issue of bonds is required annually or at specified periods to purchase and retire a certain number of its bonds and in doing so pays more than the issuing price of the bonds, the loss sustained is an allowable deduction from gross income for the year in which such purchase is made under the following conditions:

(1) If the bonds were sold at face value, then the loss is the difference between the face value and the price at which they were repurchased for retirement.

(2) If the bonds were sold at a premium or at a discount, then the loss is the difference between the price at which the bonds were sold and the price at which they were repurchased, plus, in the case of bonds sold at a premium, the amount of such premium already returned as income, or minus, in the case of bonds sold at a discount, the amount of such discount already deducted as a loss.

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When a corporation sets aside a part of its earnings for the purpose of creating a sinking fund with which to retire its bonded or other indebtedness, the annual additions to such funds are not allowable deductions from gross income.

Art. 621. Returns.—Every corporation not expressly exempt from tax and every personal service corporation must make a return of income, regardless of the amount of its net income. In the case of ordinary corporations the return shall be on form 1120. For returns of insurance companies see article 623; of personal service corporations see article 624; of foreign corporations see article 625; and of affiliated corporations see section 240 of the statute and articles 631-638. A corporation having an existence during any portion of a taxable year is required to make a return.

Art. 624. Returns of personal service corporations.—Every personal service corporation must make a return of income, regardless of the amount of its net income. The return shall be on form 1065 (revised). It shall be made for the taxable year of the personal service corporation; that is, for its annual accounting period (fiscal year or calendar year, as the case may be), regardless of the taxable years of its stockholders. See sections 200, 212, and 218 of the statute and articles 1523-1532, 25, 26, and 325-333.

Art. 625. Returns of foreign corporations.—Every foreign corporation having income from sources within the United States must make a return of income on form 1120. If such a corporation has no office or place of business here, but has a resident agent, he shall make the return. It is not necessary, however, for it to be required to make a return that the foreign corporation shall be engaged in business in this country or that it have any office branch or agency in the United States. See article 548.

Art. 631. Affiliated corporations.—The provision of the statute requiring affiliated corporations to file consolidated returns is based upon the principle of levying the tax according to the true net income and invested capital of a single business enterprise, even though the business is operated through more than one corporation. Where one corporation owns the capital stock of another corporation or other corporations, or where the stock of two or more corporations is owned by the same interests, a situation results which is closely analogous to that of a business maintaining one or more branch establishments. In the latter case, because of the direct ownership of the property, the invested capital and net income of the branch form a part of the invested capital and net income of the entire organization. Where such branches or units of a business are owned and controlled through the medium of separate corporations, it is necessary to require a consolidated return in order that the invested capital and net income of the entire group may be accurately determined. Otherwise opportunity would be afforded for the evasion of taxation by the shifting of income through price fixing, charges for services and other means by which income could be arbitrarily assigned to one or another unit of the group. In other cases without a consolidated return excessive taxation might be imposed as a result of purely artificial conditions existing between corporations within a controlled group. See articles 785, 791, 802, and 864-869.

Art. 632. Consolidated returns.—Affiliated corporations, as defined in the statute and in article 633, are required to file consolidated returns on form 1120. The consolidated return shall be filed by the parent or principal corporation in the office of the collector of the district in which it has its principal office. Each of the other affiliated corporations shall file in the office of the collector of its district form 1122, along with the several schedules indicated thereon.

Art. 633. When corporations are affiliated.—Corporations will be deemed to be affiliated (a) when one corporation owns directly or controls

through closely affiliated interests or by a nominee or nominees substantially all the stock of the other or others, or (b) when substantially all the stock of two or more corporations is owned or controlled by the same interests. The words "substantially all the stock" shall be deemed to mean 95 per cent or more of the outstanding voting capital stock (not including stock in the treasury) at the beginning of and during the taxable year. When the stock ownership falls below 95 per cent, but is in excess of 50 per cent, a full disclosure of affiliations shall be made, and if it appears that the taxes can not be equitably assessed in such cases on the basis of separate returns, consolidated returns may be required. The words "by the same interests" shall be deemed to mean the same individual or partnership or the same individuals or partnerships, but when the stock of two or more corporations is owned by two or more individuals or by two or more partnerships a consolidated return is not required unless the percentage of stock held by each individual or each partnership is substantially the same in each of the affiliated corporations.

PART II B.

WAR PROFITS AND EXCESS PROFITS TAX

Art. 811. Intangible and tangible property. — "Intangible property" includes patents and goodwill and other like property. "Tangible property" includes all property other than intangible property. Most contracts are intangible property and in the absence of a specific ruling by the commissioner to the contrary should be so regarded for the purpose of making returns. A contract may be treated as tangible property only after the submission of a full statement as to its exact nature showing to the satisfaction of the commissioner that it relates to rights in tangible property to such an extent that its value arises chiefly therefrom. Associated Press, United Press and similar franchises and subscription lists and mailing lists are intangible property.

Art. 812. Borrowed capital: securities.—Any interest in a corporation represented by bonds, debentures or other securities, by whatever name called, including so-called preferred stock, if with respect to the payment of either interest or principal it ranks with or prior to the interest of the general creditors, is borrowed capital and cannot be included in computing invested capital. Any such preferred stock may, however, be so included if it is deferred with respect to the payment of both interest and principal to the interest of the general creditors.

Art. 813. Borrowed capital; amounts left in business.—Whether a given amount paid into or left in the business of a corporation constitutes borrowed capital or paid-in surplus is largely a question of fact. Thus, indebtedness to stockholders actually cancelled and left in the business would ordinarily constitute paid-in surplus, while amounts left in the business representing salaries of officers in excess of their actual withdrawals, or deposit accounts in favor of partners in a partnership succeeded by the corporation, will be considered paid-in surplus or borrowed capital according to the facts of the particular case. *The general principle is that if interest is paid or is to be paid on any such amount, or if the stockholder's or officer's right to repayment of such amount ranks with or before that of the general creditors, the amount so left with the corporation must be considered as borrowed capital and be so treated in computing invested capital.*

Art. 814. Borrowed capital; other illustrations.—Items such as deposits or amounts due to other banks shown in the balance-sheet of a bank, unexpired subscriptions shown in the balance-sheet of a publishing concern, etc., are deemed liabilities and can not be included in computing invested capital.

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Art. 815. Inadmissible assets.—Stocks, bonds and other obligations (other than obligations of the United States), the dividends or interest from which are not required to be included in computing net income, are inadmissible assets even though no such dividends or interest have been actually paid or received during the taxable year. The failure to pay or to receive dividends or interest does not change the status of such securities as inadmissible assets. *A corporation can not by including the income from inadmissible assets as taxable income create the right to have such assets considered admissible assets.*

Art. 818. Admissible assets.—Admissible assets include all assets other than inadmissible assets. *Organisation expenses and deferred charges against future income are admissible assets.* For all purposes of computing invested capital admissible assets must be valued in accordance with the provisions of sections 326, 330 and 331 of the statute and the articles thereunder.

Art. 831. Meaning of invested capital.—*Invested capital within the meaning of the statute is the capital actually paid in to the corporation by the stockholders, including the surplus and undivided profits, and is not based upon the present net worth of the assets, as shown by an appraisal or in any other manner.* The basis or starting point in the computation of invested capital is found in the amount of cash and other property paid in, the valuation at which such other property may be included being determined in accordance with the statute and the regulations. The computation does not stop, however, with such original entries or amounts, but also takes into account the surplus and undivided profits of prior years left in the business. The invested capital of a corporation includes, generally speaking, (a) the cash paid in for stock, (b) the tangible property paid in for stock, (c) the surplus and undivided profits, and (d) the intangible property paid in for stock (to a limited amount), less, however, the same proportion of such aggregate sum as the amount of inadmissible assets bears to the total assets. Invested capital does not include borrowed capital. See section 325 and articles 811-818.

Art. 836. Tangible property paid in; value in excess of par value of stock.—Evidence offered to support a claim for a paid-in surplus must be as of the date of the payment, and may consist among other things of (a) an appraisal of the property by disinterested authorities made on or about the date of the transaction; (b) certification of the assessed value in the case of real estate; and (c) proof of a market price in excess of the par value of the stock or shares. The additional value allowed in any case is confined to the value definitely known or accurately ascertainable at the time of the payment. *No claim will be allowed for a paid-in surplus in a case in which the additional value has been developed or ascertained subsequently to the date on which the property was paid in to the corporation, or in respect of property which the stockholders or their agents on or shortly before the date of such payment acquired at a bargain price, as for instance, at a receiver's sale.* Generally, allowable claims under this article will arise out of transactions in which there has been no substantial change of beneficial interest in the property paid in to the corporation, and in all cases the proof of value must be clear and explicit.

Art. 837. Surplus and undivided profits: paid-in surplus.—Where it is shown by evidence satisfactory to the commissioner that tangible property has been paid in by a stockholder to a corporation as a gift or at a value definitely known or accurately ascertainable as of the date of such payment clearly and substantially in excess of the cash or other consideration paid by the corporation therefor, then the amount of the excess shall be deemed to be paid-in surplus. Substantially the same kind of evidence will be required under this article as under article 836. See further article 813.

Art. 838. Surplus and undivided profits: earned surplus.—*Only true earned surplus and undivided profits can be included in the computation of invested capital, and if for any reason the books do not properly reflect the true surplus such adjustments must be made as are necessary in order to arrive at the correct amount. In the computation of earned surplus and undivided profits full recognition must first be given to all expenses incurred and losses sustained from the original organization of the corporation down to the taxable year, including among such expenses and losses reasonable allowances for depreciation, obsolescence, or depletion of property (irrespective of the manner in which such property was originally acquired), and for the amortization of any discount on its bonds. There can of course be no earned surplus or undivided profits until any deficit or impairment of paid-in capital due to depletion, depreciation, expense, losses, or any other cause has been made good. Where adequate evidence is presented that the amounts written off or deducted in previous returns of net income are in the aggregate incorrect or unreasonable, adjustments must be made, and the taxpayer will be allowed a refund in respect of any taxes overpaid in prior years, or in the case of an underpayment of taxes will be additionally assessed.*

Art. 845. Surplus and undivided profits: reserve for income and excess profits taxes.—*For the purpose of computing invested capital federal income and war profits and excess profits taxes are deemed to have been paid out of the net income of the taxable year for which they are levied. It is immaterial, therefore, whether reserves for the payment of such taxes for the preceding year have been set up or not, or if set up whether such taxes when paid have actually been charged against such reserves. Amounts payable on account of such taxes for the preceding year may be included in the computation of invested capital only until such taxes become due and payable. A deduction from the invested capital as of the beginning of the taxable year must therefore be made for such taxes or any installment thereof, averaged for the proportionate part of the taxable year after the date when the tax or the installment is due and payable. Where as the result of an audit by the commissioner, or the acceptance of an amended return, or for any other reason, the amount of any such tax for the preceding year is subsequently changed, a corresponding adjustment will be made in the invested capital for the taxable year upon the same basis as if the corrected amount of the tax for the preceding year had been used in the original computation of the invested capital for the taxable year. See article 1541.*

Art. 850. Surplus and undivided profits: current profits.—*Profits earned during any year can not be included in the computation of invested capital for that year, even though during the year such profits are set up as surplus on the books or assumed to be distributed in the form of stock dividends. If a dividend is declared and paid during any year out of the profits of that year and the stockholders pay back into the corporation all or a substantial part of the amount of such dividends, the amount so paid back can not be included in the computation of invested capital unless the corporation shows by evidence satisfactory to the commissioner that the dividends were paid in good faith and without any understanding, express or implied, that they were to be paid back.*

Art. 851. Intangible property paid in.—*The actual cash value of intangible property paid in for stock or shares must be determined in the light of the facts in each case. Among the factors to be considered are (a) the earnings attributable to such intangible assets while in the hands of the predecessor owner; (b) the earnings of the corporation attributable to the intangible assets after the date of their acquisition; (c) representative sales of the stock of the corporation at or about the date of the acquisition of the intangible assets; and (d) any cash offers for the purchase of the business, including the intangible property, at or about the time of its acquisition. A corporation claiming a value for intangible*

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property paid in for stock or shares should file with its return a full statement of the facts relating to such valuation. See also article 835.

Art. 852. Percentage of inadmissible assets.—For the purpose of ascertaining the deductible percentage the amount of inadmissible assets held during the year may ordinarily be determined by dividing by two the sum of the amount of such assets held at the beginning of the year and the amount held at the end of the year. The total amount of admissible and inadmissible assets held during the year may ordinarily be determined by dividing by two the sum of the amount of such assets held at the beginning of the year and the amount at the end of the year. If at any time a substantial change has taken place either in the amount of inadmissible assets or in the total amount of admissible and inadmissible assets, the effect of such a change shall be averaged exactly from the date on which it occurred. In any case where the commissioner finds that either amount determined as above provided does not substantially reflect the average situation throughout the year, and that the amount of each kind of assets held on a given day of each month throughout the year or at more frequent intervals can be determined, the amount of inadmissible assets and the amount of both kinds of assets held during the year shall be determined by averaging the amounts held at such several times. In making the computations under this article the valuation at which each asset is carried shall be adjusted in accordance with the provisions of the statute and of the regulations relating to the valuation of assets for the purpose of computing invested capital. It is immaterial whether such assets were acquired out of invested capital or out of profits earned during the year or borrowed capital.

Art. 853. Changes in invested capital during the year.—The invested capital as of the beginning of any period of one year or less should be adjusted by an appropriate addition or deduction for each change in invested capital during the period. The amount so added or deducted in each case is the amount of the change averaged for the time remaining in the period during which it is in effect. The fraction used in finding such average is the number of days remaining in the period (including the day on which the change occurs) over the number of days in the period.

Art. 857. Method of determining available net income.—Whether at the time of any payment made during the taxable year there is sufficient income of the taxable year available for such payment, or whether the surplus or undivided profits as of the beginning of the taxable year must be reduced by the amount of such payment, will be determined according to the following principles:

(1) The aggregate amount of earnings for the taxable year available for all purposes up to any given date will, unless otherwise shown by the books, be determined upon the basis of the same proportion of the net income for the taxable year (as finally determined for the purpose of income and excess profits taxes) as the part of the year already elapsed is of the entire year (determined in the manner provided in article 853).

(2) The aggregate amount available will be deemed to be applied for the following purposes in the order in which they are stated: (a) accrued federal income and war excess profits taxes for the taxable year (see article 845); (b) dividends paid after the expiration of the first sixty days of the taxable year (see section 201 of the statute and article 1541); and (c) other corporate purposes, including the purchase of outstanding stock of the corporation previously issued (see article 862).

(3) Where the amount available is determined by prorating the net income for the year, and as a result of an audit of a return by the commissioner, the acceptance of an amended return or any other reason, the amount of the net income is subsequently changed, a corresponding adjustment will be made in the invested capital in so far as it is affected by this article, upon the same basis as if the corrected amount of the net income had been used in the original computations under this article.

Art. 858. Effect of ordinary dividend.—A dividend other than a stock dividend affects the computation of invested capital *from the date when the dividend is payable* and not from the date when it is declared, except that where no date is set for its payment the date when declared will be considered also the date when payable. For the purpose of computing invested capital a dividend paid after the expiration of the first sixty days of the taxable year will be deemed to be paid out of the net income of the taxable year to the extent of the net income available for such purpose on the date when it is payable. See article 857. *The surplus and undivided profits as of the beginning of the taxable year will be reduced as of the date when the dividend is payable by the entire amount of any dividend paid during the first sixty days of the taxable year and by the amount of any other dividend in excess of the current net income available for its payment.* From the date when the dividend is payable the amount which the several stockholders are entitled to receive will be treated as if actually paid to them, whether or not it is so paid in fact, and the surplus and undivided profits, either of the taxable year or of the preceding years, will in accordance with the foregoing provisions be deemed to be reduced as of that date by the full amount of the dividend. Amounts paid to stockholders in anticipation of dividends, or amounts withdrawn by stockholders in excess of dividends declared, will in computing invested capital have the same effect as if actually paid as dividends. See also article 813, and see generally section 201 and articles 1541-1548.

Art. 859. Effect of stock dividend.—*The payment of a stock dividend has no effect upon the amount of invested capital.* Such items as appraised value of goodwill, appreciation in value of real estate or other tangible property, etc., although carried to surplus and distributed as stock dividends, can not in this manner be capitalized and included in computing invested capital. If a corporation has paid a stock dividend in excess of its true surplus, it can not be deemed to have any greater invested capital than could have been computed had no such stock dividend been paid.

Art. 860. Impairment of capital.—*Capital or surplus actually paid in is not required to be reduced because of an impairment of capital in the nature of an operating deficit,* except where there has been directly or indirectly a liquidation or return of their investment to the stockholders, in which case full effect must be given to any liquidation of the original capital.

Art. 861. Surrender of stock.—Where stock which has originally been issued or exchanged by the corporation for property (tangible or intangible) is returned to the corporation as a gift or for a consideration substantially less than its par value, the stock so returned shall not be treated as a part of the stock issued or exchanged for such property. The proceeds derived in cash or its equivalent from the resale of the stock so returned shall, however, be included in computing invested capital. See article 542.

Art. 862. Purchase of stock.—Where a corporation either directly or indirectly, as for example through a trustee, has prior to the taxable year bought its own stock, either for the purpose of retirement or of holding it in the treasury or for other purposes, the entire cost of such stock must be deducted from the aggregate invested capital as of the beginning of the taxable year, if such deduction has not already been made. *Where such stock is purchased during the taxable year a deduction from the invested capital as of the beginning of the taxable year and effective from the date of such purchase is required only to the extent that such stock has not been purchased out of the undivided profits of the taxable year.* See article 857. The full amount derived in cash or its equivalent from the resale of such stock may be included in the invested capital from the date of such resale. See article 542.

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Art. 863. Invested capital and other measures of capital.—(a) The invested capital as here defined *may differ from the capital as shown on the books of the corporation*. In such event no changes should be made in the books themselves. The corporation should, however, in all cases keep a permanent record of the adjustments which are made in computing invested capital. (b) Section 1000 of the statute imposes a tax on the fair value of the capital stock of corporations. As in the case of the war profits and excess profits tax, the invested capital is based upon the actual investment of the stockholders in the corporation, irrespective of the present value of its assets, and in the case of the capital stock tax the fair value looks to the present value of the corporation's assets, irrespective of the amount of the investment of the stockholders therein, *the amount determined as the fair value of the capital stock for the purpose of the capital stock tax can have no bearing upon the determination of invested capital*.

Art. 867. Affiliated corporations: stock of subsidiary acquired for cash.—When all or substantially all of the stock of a subsidiary corporation was acquired for cash, the cash so paid shall be the basis to be used in determining the value of the property acquired.

Art. 868. Affiliated corporations: stock of subsidiary acquired for stock.—When substantially all the stock of a subsidiary corporation was acquired with the stock of the parent corporation, the amount to be included in the consolidated invested capital in respect of the corporation acquired shall be the actual cash value of the stock of the subsidiary corporation at the date or dates acquired, measured by the cash value of its net assets at such date or dates (the cash value of tangible and intangible assets being separately determined), but limited to the par value of the stock of the parent corporation issued therefor, or if the stock of the parent corporation has no par value, then limited to the value of such non-par value stock ascertained in accordance with the provisions of section 325 (b) of the statute. If in connection with such acquisition a paid-in surplus is claimed, such claim will be subject to the provisions of article 837.

Art. 869. Affiliated corporations: invested capital for pre-war period.—The invested capital of affiliated corporations for the pre-war period shall be computed on the same basis as the invested capital for the taxable year, except that where any one or more of the corporations included in the consolidation for the taxable year were in existence during the pre-war period, but were not then affiliated as herein defined, then the average consolidated invested capital for the pre-war period shall be the average invested capital of the affiliated corporations plus the average invested capital of the corporations not affiliated during the pre-war period. Full recognition, however, must be given to the provisions of section 330 of the statute, particularly the last paragraph thereof, and of articles 931-934.

Art. 941. Valuation of asset upon change of ownership.—Where a business is reorganized, consolidated or transferred, or property is transferred, after March 3, 1917, and an interest of fifty per cent. or greater in such business or property remains in any of the previous owners, then for the purpose of determining invested capital each asset so transferred is valued (a) as if still in the possession of the previous owner, if a corporation, or, if not a corporation, (b) at its cost to such previous owner, with proper adjustments for losses and improvements. This provision is accordingly concerned with the computation of invested capital for the taxable year, while section 330 of the statute is chiefly concerned with the determination of invested capital for the pre-war period. See articles 931 and 932.

PART IV

DEFINITIONS AND GENERAL PROVISIONS

Art. 1543. Dividends paid in property.—*Dividends paid in securities or other property* (other than its own stock), in which the earnings of a cor-

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poration have been invested, *are income to the recipients to the amount of the fair market value of such property* when receivable by the stockholders. *A dividend paid in stock of another corporation is not a stock dividend.* Where a corporation declares a dividend payable in stock of another corporation, setting aside the stock to be so distributed and notifying the stockholders of its action, *the income arising to the recipients of such stock is its fair market value at the time the dividend becomes payable.* Scrip dividends are subject to tax in the year in which the warrants are issued.

Art. 1583. Inventories at cost.—Cost means :

(1) In the case of merchandise purchased, the invoice price less trade or other discounts except strictly cash discounts approximating a fair interest rate, which may be deducted or not at the option of the taxpayer provided a consistent course is followed. To this net invoice price should be added transportation or other necessary charges incurred in acquiring possession of the goods. Goods taken in the inventory which have been so intermingled that they can not be identified with specific invoices will be deemed to be *the goods most recently purchased.*

(2) In the case of merchandise produced by the taxpayer, (a) the cost of raw materials and supplies entering into or consumed in connection with the product, (b) expenditures for direct labor, (c) indirect expenses incident to and necessary for the production of the particular article, including in such indirect expenses a reasonable proportion of management expenses, but *not including any cost of selling or return on capital* whether by way of interest or profit.

In any industry in which the usual rules for computation of cost of production are inapplicable, costs may be approximated upon such basis as may be reasonable and in conformity with established trade practice in the particular industry.

Art. 1584. Inventories at market.—Market means *the current bid price prevailing at the date of the inventory* for the particular merchandise, and is applicable to goods purchased and on hand and to basic materials in goods in process of manufacture and in finished goods on hand, exclusive, however, of goods on hand or in process of manufacture for delivery upon firm sales contracts at fixed prices entered into before the date of the inventory. Where no open market quotations are available the taxpayer must use *such evidence of a fair market price as may be available* to him, such as specific transactions in reasonable volume entered into in good faith, or compensation paid for cancellation of contracts for purchase commitments. The burden of proof will rest upon the taxpayer in each case to satisfy the commissioner of the correctness of the prices adopted.

Art. 1585. Inventories by dealers in securities.—A dealer in securities, who in his books of account regularly inventories unsold securities on hand either (a) at cost or (b) at cost or market value whichever is lower, may make his return upon the basis upon which his accounts are kept; provided that a description of the method employed shall be included in or attached to the return, that all the securities must be inventoried by the same method, and that such method must be adhered to in subsequent years, unless another be authorized by the commissioner. For the purpose of this rule *a dealer in securities is a merchant of securities, whether an individual, partnership or corporation, with an established place of business, regularly engaged in the purchase of securities and their resale to customers, that is, one who as a merchant buys securities and sells them to customers with a view to the gains and profits that may be derived therefrom.* If such business is simply a branch of the activities carried on by such person, *the securities inventoried as here provided may include only those held for purposes of resale and not for investment.* Taxpayers who buy and sell or hold securities for investment or speculation, and not

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in the course of an established business, and officers of corporations and members of partnerships, who in their individual capacities buy and sell securities, are not dealers in securities within the meaning of this rule.

TREASURY RULINGS

(T. D. 2792, Feb. 19, 1919)

Income tax

Extension of time in which to file returns of taxpayers for the year 1918 with the collector of internal revenue for the district of Hawaii, pursuant to the requirements of the new revenue act

Because of the fact that it will be impossible to put into the hands of taxpayers residing or located in the internal-revenue district of Hawaii the blank forms and instructions prescribed by this department for the use of taxpayers in making returns pursuant to the new revenue act in time for such returns to be filed on or before the due date (March 15, 1919), an extension of time of 60 days from that date is hereby granted to all taxpayers filing returns in the internal-revenue district of Hawaii.

(T. D. 2794, Feb. 21, 1919)

Income taxes

Meaning of "nonresident alien"

"Nonresident alien individual" means an individual (a) whose residence is not within the United States and (b) who is not a citizen of the United States. Residence will be determined in accordance with the following:

(1) *Establishment of residence.*—Any alien living in the United States who is not a mere transient, as explained below, is a resident of the United States for purposes of the income tax. Whether he is a transient or not is determined by his intentions with regard to his stay. If he lives in the United States, and has no definite intention as to his stay, he is a resident. The best evidence of his intention is afforded by the conduct, acts, and declarations of the alien. The typical transient is one who stops for a short time in the course of a journey through the United States, sometimes performing labor, sometimes not; or one who enters the United States intending only to stay long enough to carry out some purpose, object, or plan not involving an extended stay in the United States. A mere floating intention, indefinite as to time, to return to another country, is not sufficient to constitute him a transient.

(2) *Proof of residence.*—An alien's statements as to his intention with regard to residence are not conclusive, but when unequivocal will determine the question of his intention, unless his conduct, acts, or other surrounding circumstances contradict the statements. It sometimes occurs that an alien who genuinely intends his stay to be transient may put off his departure from time to time by reason of changed conditions, remaining a transient though living in the United States for a considerable time. The fact that an alien's family is abroad does not necessarily indicate that he is a transient rather than a resident. An alien, who enters this country intending to make his home in a foreign country as soon as he has accumulated a sum of money sufficient to provide for his journey abroad, is to be considered a transient provided his expectation in this regard may reasonably be fulfilled within a comparatively short time, considering the rate of his saving.

(3) *Loss of status as a resident.*—It will be presumed that an alien who has established a residence in the United States, as outlined above, continues to be a resident until he or his family evidence an intention to

change residence to another country by starting to remove. Thus, alien residents who, following the armistice agreement of November, 1918, take steps toward returning to their native countries, as by applying for passports, are to be regarded as residents for that portion of the taxable year which elapsed up to the time such step was taken.

(4) *Practice of employers in determining status of alien employees.*— Aliens employed in the United States are prima facie regarded as non-residents. If wages are paid without withholding the tax, the employer should be provided with written proof of facts which overcome the presumption that such alien is a nonresident. Such facts include the following: (a) If an alien has been living in the United States for as much as one year immediately prior to the time he entered the employment of the withholding agent or if he has been regularly employed by an individual resident in the United States or by a resident corporation in the same city or county for as much as three months immediately prior to any payment by the employer, he may be treated as a resident in deciding as to the necessity of withholding part of such payment, provided no facts are known to the employer showing that he is in fact a transient, such as one of the types mentioned under (1). The facts with regard to the length of time the alien has thus lived in this country or has been so regularly employed may be established by the certificate of the alien. (b) The employer may also obtain evidence to overcome the prima facie presumption of nonresidence by securing from the alien form 1078, revised, properly executed, or an equivalent certificate of the alien establishing residence. Having secured such evidence from the alien, the employer may rely thereon unless the statement of the alien was false and the employer had reasonable cause to believe it false, and may continue to rely thereon until the alien ceases to be a resident under the provisions of the preceding paragraph. An employer who seeks to account for failure to withhold before this date, if he did not at the time secure form 1078, or its equivalent, is permitted to prove the former status of the alien by any material evidence.

(5) T. D. 2242 is modified so far as inconsistent herewith.

Form 1078, as revised, is as follows:
Form 1078, revised.

[This certificate has no effect on citizenship.]

Certificate of alien claiming residence in the United States

[To be filed with withholding agent by alien residing in the United States
for the purpose of claiming the benefit of such residence
for income tax purposes.]

I hereby declare that I am a citizen or subject of; that I arrived in the United States on or about; that I am living in the United States and have no definite intention as to when (if at all) I will make another country my home; that the address in the United States where any notices relative to income tax may be sent or mailed to me is

(Street and number.) (City.) (State.)
 (Signed).....

Sworn to and subscribed before me this
.....day of....., 191..

.....

.....

(Official capacity.)

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(T. D. 2796, Feb. 27, 1919)

Returns of information

The time for filing returns of information, fiduciary returns (form 1041), withholding returns (forms 1042 and 1013), and partnerships as hereinafter outlined, is extended to May 15, 1919, and to March 15, 1919, in the case of corporations and partnerships having a fiscal year ending in 1918

In view of the delay in the final passage of the revenue act of 1918 and of the preparation of the forms required thereunder, an extension of time to include May 15, 1919, is hereby granted for the filing of returns of information (forms 1099 and 1096), fiduciary returns (form 1041), annual withholding returns (form 1042, accompanied by form 1098 and form 1013), returns of partnerships which are required to file returns on the calendar year basis, and all other returns which are not the basis for the assessment of the tax.

This decision shall not be construed as relieving taxpayers from filing returns which serve as a basis for assessment, even though the person making the return is not taxable thereon; nor as relieving beneficiaries, partners, and stockholders of personal-service corporations from including in their personal returns their distributive share of the income accruing to the trust or estate or the partnership or personal-service corporation, whether distributed or not.

Partnerships and corporations having a fiscal year ending in 1918 which have secured extensions of time which have not expired are hereby granted an extension of time to March 15, 1919, for the filing of such returns. When the returns are filed, two forms should be used and two computations made, one showing on the return form used for 1917 the tax calculated on the whole income for the entire period under the provisions and at the rates prescribed by the act of October 3, 1917, the other showing on the form for 1918 the tax on the whole income for the entire period, calculated under the provisions and at the rates prescribed by the revenue act of 1918. The tax due will be the sum of so many twelfths of the first amount as there are months in 1917 covered by the return, and of the second amount as there are months in 1918.

In view of the disturbed conditions abroad and the consequent interference with the usual channels of communication, an extension of time for filing returns of income for 1918 and subsequent years is hereby granted in the case of alien individuals actually living beyond the boundaries of the United States, and corporations, or their proper representatives in the United States, and of American citizens residing or traveling abroad, including persons in military or naval service on duty outside the United States, for such period as may be necessary, not exceeding 90 days after proclamation by the president of the end of the war with Germany. In all such cases an affidavit must be attached to the return, stating the causes of the delay in filing it, in order that the commissioner may determine whether the failure to file the return in time was due to a reasonable cause and not to wilful neglect. If the showing justifies the conclusion that the failure to file the return in time was excusable, no penalty by way of addition to the tax will be imposed, except interest, as provided by the statute.

(T. D. 2797, March 11, 1919)

Time of payment of tax where a corporation has filed a return for a fiscal year ending in 1918

If a corporation has before February 25, 1919, filed a return for a fiscal year ending in 1918 and paid or become liable for a tax computed under the revenue act of 1917, and is subject to additional tax for the same

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period under the revenue act of 1918, the return covering such additional tax shall be filed at the same time as returns of persons making returns for the calendar year 1918 are due under existing rulings, and payment of such additional tax is due in the same instalments and at the same times as in the case of payments based on returns for the calendar year 1918. If no part of the tax for such fiscal year was due until after February 24, 1919, the whole amount of tax due, including tax due under the original return and additional tax due under the amended return, will be payable in the same instalments and at the same times as in the case of payments based on returns for the calendar year 1918.

(T. D. 2804, March 13, 1919)

Extension of time for filing returns of partnerships whose fiscal year ended in 1918

By treasury decision 2796 the time for filing certain classes of returns which are not the basis for an assessment of tax was extended to May 15, 1919, and the time for filing returns of partnerships and corporations having a fiscal year ended on the last day of some month (other than December) in the year 1918, and which had secured extensions of time in which to file returns, such extensions not having expired, was further extended to March 15, 1919.

In view of the fact that necessary forms are not yet available, a further extension to May 15, 1919, is hereby granted all such partnerships. Individual members of such partnerships, as in the case of partnerships filing on the basis of the calendar year, will be required to include in their individual returns their distributive shares of the earnings of such partnerships (ascertained or estimated) and pay at least one-fourth of the tax due on March 15th.

(T. D. 2805, March 14, 1919)

Amended returns may be accepted so that the taxable year of affiliated corporations will coincide

In any case where an affiliated corporation has made its income tax return on the basis of a taxable year different from that on the basis of which a consolidated excess profits tax return in which it is included has been made under the provisions of articles 77 (par. 1415) and 78 (par. 1417) of regulations 41 and of T. D. 2662 (1418), an amended income tax return may be made on the basis of the same taxable year as the consolidated return, even though notice was not given within the time prescribed in articles 211 to 215 (par. 1488 to 1495), inclusive, of regulations No. 33 (revised) or in regulations 45 (par. 2840). In such a case an amended income tax return shall also be made for any unaccounted for portion of the corporation's taxable year.

Collectors of internal revenue may accept amended returns made under the provisions of this treasury decision.

Greeley & Giles announce the dissolution of the firm by mutual consent. Harold Dudley Greeley will continue practice in the present offices, 149 Broadway, New York. Cecil D. Giles will continue practice during April at the same address.

It is announced that C. R. Hegan has retired from the firm of Webb, Read, Hegan & Co., and the practice hereafter will be continued under the firm name of Webb, Read & Co., with offices in England and Canada.

Students' Department

Edited by SEYMOUR WALTON, C.P.A.

(Assisted by H. A. FINNEY, C.P.A.)

INSTITUTE EXAMINATION

NOVEMBER, 1918

In regard to the following attempt to present the correct answers to the questions asked in the examination held by the American Institute of Accountants in November, 1918, the reader is cautioned against accepting the answers as official. They have not been seen by the examiners—still less endorsed by them.

ACCOUNTING THEORY AND PRACTICE

PART II, Continued.

Question 12.

Enumerate the essential heads of information which ought to be brought out in statements prepared for the information of bankers, for credit purposes. Would you or would you not amplify such information in a statement prepared for the information of

- (a) Officers and directors;
- (b) Shareholders of a company?

Answer.

First there should be a statement of assets and liabilities:

Assets

- Cash on hand and in bank
- Notes receivable of customers (not transferred)
- Accounts receivable of customers (not transferred)
- Accounts and notes of officers (not transferred)
- Merchandise finished (how valued)
 - unfinished (how valued)
 - raw material (how valued)
- Land owned, used for this business
- Buildings owned, used for this business
- Machinery owned, used for this business
- Investments (how valued)
- Other assets, if any
- Total assets

Liabilities

- Notes payable for merchandise
- Notes payable due to own banks
- Notes payable to others
- Accounts payable to outsiders
- Accounts payable to officers and stockholders
- Bonded debt (due)
- Mortgage debt other than bonds
- Chattel mortgages
- Total liabilities

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Capital

Surplus, including undivided profits
Total

There should then be given certain statistics and other information usually required by the forms furnished by the banks, such as:

The insurance carried on merchandise, buildings and machinery;

Statement of the business and results for previous year, as:

Sales for year

Gross profit on sales

Expense of conducting business

Net profit

Other income, including that from investments

Combined profit

Dividends for periods from to

Bad debts for periods from to

Contingent liabilities: notes receivable discounted, not included in assets; other contingent liabilities;

Statement that no accounts receivable are pledged or assigned, or else statement of amount so assigned and of other assets pledged.

There may be other information as to seasons of greatest activity, usual terms of purchases and of sales, etc.

(a) In a report to the officers and directors additional information should be given as to the course of the business. A condensed statement, supported by schedules of details, should be rendered showing the sales; the cost of manufacture, with percentages of detail costs to total; the cost of sales; the general expense and the financial expense, showing the details of all of them and the percentages to sales, the net profit percentage to sales proving the figures by making 100 per cent. If all these percentages are exhibited for a number of previous years, valuable information may be obtained as to the course of the business.

(b) In a report to stockholders less detail need be used than in the report to the directors, but the main facts should be given.

Question 13.

On December 31st the office of a company with which you have previously been connected as auditor is burned and all its records completely destroyed. Its plant is, however, saved, and its business can be continued without any break. You are called upon to assist in the preparation of a balance-sheet and open up new books without delay. How would you proceed? You have in your possession a balance-sheet prepared by yourself at the close of the preceding year. You will incidentally also be required to prepare the company's returns for income tax purposes.

Answer.

The question states that only the office is destroyed; therefore the plant and the inventories of materials, supplies, goods in process and finished goods can be valued and put on the books at once. The bank balance can be ascertained with virtual exactness, after allowing time for outstanding cheques to be presented. This will cover all the assets except the accounts and notes receivable. To ascertain these it will be

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necessary to obtain from the traveling men the names of all their customers and a copy of all the orders they have taken since a certain date, the time depending on the character of the accounts as to usual promptness of payment. Beginning with the December sales, request that each customer who bought in that month send in the invoices sent him, the statement rendered him on December 1, and either the cheque itself or a copy of it including endorsements, if he paid anything during the month. The invoices can be checked against the records of the transportation companies and the cheques against the deposit slips in the bank. For November, the December customers may be ignored as accounted for; for October the November customers would also be eliminated, and so on. In this way the accounts receivable could be built up again with a very good degree of accuracy, and all recent notes given by customers would also be traced.

The accounts payable would be ascertained very quickly from the monthly statements rendered by creditors as at December 31. It is almost certain that the officers of the company would remember to whom notes payable had been given, so that they could be easily checked up.

With the assets and liabilities thus ascertained and put upon the books, the net worth of the company would be disclosed. By comparison with the condition shown by the balance-sheet of the preceding December 31, the profit of the year could be found by the single entry method and the new books could be opened with very nearly accurate figures.

For the income tax the company should state the situation frankly, reporting the profits and how they were ascertained. They should also agree that in case any customers who might have been overlooked should remit of their own accord, a supplementary report would be made and the proper additional tax paid.

Question 14.

Define corpus and income and state clearly what they mean in dealing with the accounts of a decedent's estate. Outline the books you would keep in order properly to record transactions affecting such an estate, it being assumed that the will calls for the division of the estate into a number of trusts, some of which carry life rents to certain beneficiaries with a different application ultimately of the principal.

Answer.

The corpus or principal of an estate is the total of all the assets belonging to the decedent at the time of his death, whether known at that time or subsequently discovered. Charged against the corpus, and therefore reducing it, are all the debts due by the decedent, including the expenses of his last illness and of his funeral. Ordinarily real estate is not included among the assets, but it may be if the will so provides.

The income of an estate consists of interest and dividends on securities and rentals less expenses of real estate if any is included in the assets.

The question as to whether extraordinary dividends, either in stock or cash, belong to the corpus or to income or are to be apportioned between them has been decided differently in different states. The only safe thing

to do in case the corpus and income belong to different persons is to procure a ruling of the court as to the classification of such dividends.

If property included in the corpus is sold at a higher price than that at which it was inventoried, the increase is not a profit to be considered income. It is an addition to the corpus itself, classed as increase in principal. In the same manner if sold at less than inventory value the difference is not a loss chargeable against income, but is a decrease of principal.

Interest accrued on bonds, mortgages and notes receivable at the date of the death is part of the corpus. In Great Britain dividends received on stocks are also apportioned between principal and income, when they are paid, but in this country it is generally considered that dividends belong to the period in which they are declared, and do not accrue from day to day.

The only books of account necessary are a cashbook, journal and ledger. The cashbook and journal should have separate columns for principal and income. There should be an account on the ledger with each asset charged at the value at which it appears in the inventory filed in the probate (surrogate's) court, the offsetting credit account being estate. As claims against the estate are allowed they are charged to estate and credited to debts of testator. The funeral and other expenses of the corpus may be charged direct to estate or first to appropriate accounts. A single account may be kept with income or separate accounts with each class of income. There would be an account with expense-income for any expenses chargeable against income. Authorities differ as to the proper distribution of some of the current expenses of the executor.

When a trust is provided for by the will an entry is made debiting estate and crediting X trust. At the same time the securities designated for the establishment of the trust are appropriated to that purpose by an entry debiting X trust fund and crediting the account representing the securities. If the whole estate is put into one or more trusts, there will be no necessity for the fund accounts. When a trust ceases the entries creating it are reversed, reopening estate account, which is then closed by division among the residuary legatees.

Question 15.

State the rules which govern the treasury department either under law or under its official rulings with relation to the deduction of any four out of the following seven classes of deductions from gross income in preparation of returns of net revenue:

- (1) Bad debts and reserves for them;
- (2) Depreciation of horses;
- (3) Depletion of coal in a coal mining company;
- (4) Depletion of oil in an oil producing company;
- (5) Donations and charity;
- (6) Salaries of officers of a corporation;
- (7) Excess profits tax in its relation to income tax and vice versa.

Answer.

- (1) Reserves to take care of anticipated or probable losses are not proper deductions from income.

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A bad or worthless debt, as contemplated by the law, which may be deducted in a return of income, is a debt which has been ascertained to be worthless and actually charged off during the taxable year.

(2) There is permitted a deduction of a reasonable allowance for the exhaustion or wear and tear of property arising out of its use in the business or trade. This would cover horses.

(3) A reasonable allowance for the depletion of a mine, not to exceed the market value in the mine of the product thereof which has been mined and sold during the year for which the return and computation are made.

(4) A reasonable allowance for actual reduction in flow and production of oil wells, to be ascertained not by the flush flow but by the settled production or regular flow.

(5) Contributions or gifts actually made within the year to corporations or associations organized and operated exclusively for religious, charitable, scientific or educational purposes, or to societies for the prevention of cruelty to children or animals, no part of the net income of which inures to the benefit of any private stockholder or individual, to an amount not in excess of fifteen per centum of the taxpayer's taxable net income as computed before the deduction of this item. Such contributions or gifts shall be allowable as deductions only if verified under the rules of the department.

(6) Such amounts as corporations actually pay as fair and reasonable compensation for the services rendered by the officers, such salaries not being dependent upon the profits earned by the corporation, as the officers are presumed to render services equally valuable regardless of the fact that the net earnings may differ from one year to another.

Special payments made to officers who are stockholders, in the guise of additional salaries or compensation, the amount of which is based upon or bears a close relationship to the stockholdings of such officers or capital invested by them in the business of the company, will be regarded as a special distribution of profits or compensation for the capital invested and not payment for services rendered. Payments under the latter conditions, being in the nature of dividends, will not be deductible from gross income.

Salaries of officers who are stockholders will be subject to careful analysis, and if they are found to be out of proportion to the volume of business transacted, or excessive when compared with the salaries of like officers of other corporations doing a similar kind or volume of business, the amount so paid in excess of reasonable compensation for the services will not be deductible from gross income, but will be treated as a distribution of profits.

(7) The law provides "that in assessing income tax the net income embraced in the return shall also be credited with the amount of any excess profits tax imposed by act of congress and assessed for the same calendar or fiscal year upon the taxpayer and, in the case of a member of a partnership, with his proportionate share of such excess profits tax imposed upon the partnership."

Income taxes are not deductible from profits in arriving at the amount due for excess profit tax.

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Question 16.

Give a pro forma monthly operating and profit and loss statement for any one of the following industries, introducing a statistical statement showing unit costs or any other useful cost data which may be practical:

- (a) A brewery;
- (b) A flour mill;
- (c) A coal mine;
- (d) An oil development company with producing wells;
- (e) A foundry;
- (f) A rolling mill producing steel rails.

Answer.

To attempt to answer as to all six of these industries would take up more space than can be afforded. Therefore, only one answer is given, in accordance with the terms of the question, the example chosen being that of a foundry.

Exhibit A

THE BLANK STEEL FOUNDRIES

PROFIT AND LOSS STATEMENT

Month of 191...

	<i>Total</i>	<i>Per ton</i>
Gross sales		
Deductions		
Discount and royalty		
Freight		
Miscellaneous allowances		
Total deductions		
Net sales		
Deduct		
Manufacturing cost of sales (exhibit B)		
Depreciation		
Gross profit on sales		
Deduct		
Selling expense (detailed)		
Administrative and general expense (detailed)		
Total		
Net profit from operations		
Add		
Miscellaneous income		
Interest, discount and exchange		
Income from investments		
Sinking fund profits		
Miscellaneous		
Total profit and income		
Deduct		
Interest charges		
Net profit		

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Exhibit B

MONTHLY SUMMARY OF COST OF PRODUCTION

		<i>Amount</i>		<i>Per ton—Good</i>	
		<i>Labor</i>	<i>Material</i>	<i>Labor</i>	<i>Material</i>
Melted metals					
	Pig iron				
	Gross scrap				
	Other metals				
	Total metals				
	Furnace sundries				
	Labor and material				
	Stores				
	Other charges				
	Total				
	Less scrap recovered				
	Total melted metal				
Direct labor					
	Molding				
	Core				
	Cleaning and machining				
	Total direct labor				
Special charges					
	Patterns				
	Outside machining				
	Special rigging				
	Total special charges				
Burden					
	Main productive departments				
	Molding				
	Core				
	Cleaning and machining				
	Annealing				
	Total main prod. depts.				
	Auxiliary depts.				
	Steam, power and light				
	Yard				
	Total auxiliary depts.				
Repairs					
	Melted metals				
	Furnace rebuilding				
	Other				
	Molding				
	Depreciation metal flasks				
	Other				

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Core	
Cleaning and machining	
Annealing	
Steam, power and light	
Yard	
Works general expense	
Other operating expense	
Total repairs	
Works general expense	
Works administration expense	
Inspection	
Shipping	
Pattern department burden	
Repair department burden	
Test castings	
Safety expense	
Total works general expense	
Other operating expense	
Loss on defective	
Insurance and taxes	
General operating expense	
Experimental and dev. exp.	
Total other operating expense	
Total burden	
Total cost	

MONTHLY STATISTICS

PRODUCT OF CHARGE

	<i>Net tons</i>	<i>Per cent</i>
Good castings		
Scrap		
Defective castings		
Slag castings		
Heads, gates, etc.		
Lost heats		
Total scrap		
Loss		
Natural waste		
Melting and foundry loss		
Total loss		
Total		100%

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ACTUARIAL QUESTIONS (OPTIONAL).

Question 17.

A corporation wants to retire a debt of \$105,000 bearing 5% interest payable annually. The tenth payment, including interest, is to be \$15,000. The other nine periodical payments are all to include interest and to be of the same amount. Required the amount of each of such nine payments ($1.05^9 = 1.551328$).

Answer.

The problem is a little uncertain, as "retire a debt" may mean that the annual payments are to be made to the creditor or that a sinking fund is to be created. The nine annual payments would be the same in either case, but the methods would differ.

Assuming that the payments are to be made to the creditor, the last \$15,000 pays the balance of the principal outstanding at the end of the ninth year plus interest thereon at 5 per cent. Hence

$\$15,000 \div 1.05 = \$14,285.71$, unpaid principal beginning of 10th year.

Therefore

Total debt	105,000.00
Debt paid end of 10th year	14,285.71
	<hr/>
Debt to be provided for in first nine years	<u>90,714.29</u>

Since the interest is to be provided in the annual payments in addition to the principal, this \$90,714.29 is also the present value of the annuity of rents to be provided—that is, if the amount of \$90,714.29 were deposited at 5 per cent interest it would provide the required annuity to cancel the debt and interest.

The payments are computed as follows:

First, find the present value which will produce rents of \$1

$.551328$ (comp. int.) $\div 1.551328$ (amount) = $.355391$ (comp. disc.)

$.355391 \div .05 = 7.10782$, present value of 9 rents of \$1

Then, if \$7.10782 produces rents of \$1.00, \$90,917.29 will produce rents equal to the number of times 7.10782 is contained in 90,714.29.

$\$90,714.29 \div 7.10782 = \$12,762.60$, the amount of each of 9 payments necessary to pay \$90,714.29

But in addition the corporation must pay in each of the 9 years 5 per cent interest on the \$14,285.71 principal remaining at the end of the 9th year, not included in the above.

Annual payment as determined above	12,762.60
Add 5% on \$14,285.71	714.29
	<hr/>
Total annual payment	<u>13,476.89</u>

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The correctness of this annual payment is proved as follows:

TABLE SHOWING REDUCTION OF PRINCIPAL

<i>Year</i>	<i>Payment</i>	<i>Interest</i>	<i>Reduction of Principal</i>	<i>Balance of principal</i>
				105,000.00
1	13,476.89	5,250.00	8,226.89	96,773.11
2	13,476.89	4,838.66	8,638.23	88,134.88
3	13,476.89	4,406.74	9,070.15	79,064.73
4	13,476.89	3,953.24	9,523.65	69,541.08
5	13,476.89	3,477.05	9,999.84	59,541.24
6	13,476.89	2,977.06	10,499.83	49,041.41
7	13,476.89	2,452.07	11,024.82	38,016.59
8	13,476.89	1,900.83	11,576.06	26,440.53
9	13,476.89	1,322.03	12,154.86	14,285.67
10	15,000.00	714.28	14,285.72	0
	<u>136,292.01</u>	<u>31,291.96</u>	<u>105,000.05</u>	

There is an overpayment of 5 cents, which is caused by odd fractions of cents and is too trivial to notice.

If the intention is to create a sinking fund, the entire debt of \$105,000 will be outstanding the tenth year, and the interest thereon will be \$5,250, so that there will be 15,000—5,250, or 9,750, added to the fund the last year.

Therefore, of the total principal or fund of	105,000
The last year will provide	<u>9,750</u>

And the first 9 years' contributions will provide 95,250

But at the end of the first nine years it will not be necessary to have \$95,250 in the fund, as the amount accumulated at the end of the ninth year will earn a year's interest during the tenth year. Hence

$95,250 \div 1.05 = 90,714.29$ the amount of 9 rents at end of 9th year.

Amount of rents of 1 = $.551328 \div .05 = 11.02656$

$90,714.29 \div 11.02656 = 8,226.89$ annual payment to pay principal

Add 5,250.00 annual interest

Total annual payment 13,476.89 (as above)

TABLE SHOWING ACCUMULATION OF FUND

<i>Year</i>	<i>Cash</i>	<i>Interest paid</i>	<i>Added to fund</i>	<i>Interest earned</i>	<i>Total fund</i>
1	13,476.89	5,250	8,226.89		8,226.89
2	13,476.89	5,250	8,226.89	411.34	16,865.12
3	13,476.89	5,250	8,226.89	843.26	25,935.27
4	13,476.89	5,250	8,226.89	1,296.76	35,458.92
5	13,476.89	5,250	8,226.89	1,772.95	45,458.76
6	13,476.89	5,250	8,226.89	2,272.94	55,958.59
7	13,476.89	5,250	8,226.89	2,797.93	66,983.41
8	13,476.89	5,250	8,226.89	3,349.17	78,559.47
9	13,476.84	5,250	8,226.89	3,927.97	90,714.33
10	15,000.00	5,250	9,750.00	4,535.72	105,000.05
	<u>136,292.01</u>	<u>52,500</u>	<u>83,792.01</u>	<u>21,208.04</u>	

Of course, in an examination only one of these methods need be given.

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Question 18.

A \$10,000 five per cent semi-annual coupon bond is bought on a 4 per cent basis due $1\frac{1}{2}$ years hence. What did it cost?

Answer.

On an investment of \$10,000 the purchaser would be satisfied with an interest return of 4 per cent per annum, or 2 per cent per period of six months. Instead of 2 per cent or \$200 each period, he receives $2\frac{1}{2}$ per cent, or \$250. Therefore, in addition to a satisfactory interest he receives a periodical sum or annuity of \$50 for three periods. It is required to determine what he shall pay for this annuity, money being worth 4 per cent per annum—in other words, to find the present value of this annuity.

First find the present value of 1.

Let P equal present value desired; I , the compound interest on \$1 at the given rate for the number of periods; a , the accumulated value of \$1 at the given rate for the number of periods; i , the given rate of interest.

The formula is $P = \frac{I \div a}{i}$ that is, it equals the compound interest

divided by the accumulated value of \$1 at compound interest, and that quotient divided by the rate of interest. In this case,

$I = .061208$, the compound interest at 2% on \$1 for 3 periods

$a = 1.061208$, accumulated value of \$1 at 2% for 3 periods

$.061208 \div 1.061208 = .057678$ the first quotient

$.057678 \div .02$ (rate of interest) = 2.8839. Therefore $P = \$2.8839$ or the present value of an annuity of \$1 at 2% for 3 terms.

$\$2.8839 \times 50 = \144.20 , the present value of an annuity of \$50 at 2% for 3 terms.

Therefore the purchaser would pay for the 4% rate	10,000.00
And for the additional 1 per cent	144.20

Total cost	10,144.20
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However, if the examinee does not remember the formula (small blame to him if he doesn't) there is an easier way to answer the question.

The purchaser is to receive \$50 at the end of each of 3 periods of 6, 12 and 18 months respectively. For these three amounts he is to pay their present value at 2 per cent compound interest. The present value of \$50 at the end of 6 months is that sum which, invested at 2% will produce \$50. In other words \$50 is 102% of that present value, and \$50 divided by 1.02, or \$49.02, is the present value of \$50 due 6 months hence. In the same way \$50 due 12 months hence is the present value plus 2% compound interest on the present value for two terms. The compound interest being 4.04 per cent, \$50 is 104.04 per cent of the present value, and \$50 divided by 1.0404 equals \$48.06, the present value of the second payment of \$50, and so on.

But, $1.0404 = 1.02 \times 1.02$, therefore $50 \div 1.0404$ is the same as $(50 \div 1.02) \div 1.02$. We have seen that $50 \div 1.02 = 49.02$; therefore, substituting, $49.02 \div 1.02 = 48.06$, the present value of the second \$50.

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In the same way, the present value of the third payment is found by dividing the present value of the second by 1.02. If there were more terms the present value of each would be found by dividing the present value of the one immediately preceding by 1.02.

Without all this explanation, a short answer is as follows:

In addition to the 4 per cent interest on \$10,000, the purchaser gets an annuity of \$50 for three terms of 6 months each, for which he is to pay the present value at 2 per cent.

\$50.00 ÷ 1.02 = present value of first term	49.02
49.02 ÷ 1.02 = " " " second term	48.06
48.06 ÷ 1.02 = " " " third term	47.12

Total value of annuity	\$144.20
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This is proved by the following statement:

Original investment		10,144.20
Coupons collected	250.00	
Less 2% on \$10,144.20	202.88	47.12
Principal end of 6 months		10,097.08
Coupons collected	250.00	
Less 2% on \$10,097.08	201.94	48.06
Principal end of 12 months		10,049.02
Coupons collected	250.00	
Less 2% on \$10,049.02	200.98	49.02
Principal due at end of 18 months		10,000.00

RESERVE FOR TAXES

Editor, Students' Department:

SIR: Will you kindly give me your opinion on the following paragraph copied from a publication of recent date:

"Our advice is to establish an adequate reserve against taxes, but *not* to charge the taxes, when paid, against the reserve. *Instead, charge them as 'current expenses' when paid, and let the reserve remain as part of surplus.* The mere setting up of a reserve for taxes does not in itself reduce the invested capital. It is only when the tax as paid is charged against the reserve that invested capital is reduced. You would get the same effect by charging the taxes, when paid, against the surplus."

It is not clear to me how the above advice can be followed. In setting up a reserve for taxes, would one not be obliged to charge taxes, and in charging the actual payment of taxes to expense, would it not make a double charge for the same expense? Your opinion will be greatly appreciated.

Respectfully yours,

Bridgeport, Connecticut.

H. H. C.

It would be hard to make it clear to any one how a reserve for taxes could be set up without charging "taxes," which as all of us who are not exempt from income tax know is an expense and not an asset. It must be included among the debits to profit and loss in closing the books. The

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reserve that has thus been set up is not a part of surplus; it is a direct and active liability. In fact the word "reserve" is used only as a convenience. The amount of the taxes is a liability to the government and the account could better be called "Due government for taxes." It is much more active than most other liabilities, because it is subject to penalty and heavy interest if not paid promptly.

However, the charge of taxes to profit and loss is made in closing the books of the year for which the taxes are levied, but the actual amount is not paid until the next year. So far all is well. If, when the taxes are actually paid, they are again charged as current expenses, and the same practice is followed in each subsequent year, there is no duplication of taxes in any one year, because there is only one such expense charged each year. The error consists in charging the second year with the same taxes as the first year, the third year with the taxes of the second, and so on. If the taxes were exactly the same each year no harm would be done, but if they vary, the true condition is not shown, either as to the tax expense of each year or the liability to the government at the end of each year, since the reserve for the taxes of the first year remains the reserve for all subsequent years.

That is, if the taxes for 1916 were \$1,000, there would be a charge on December 31, 1916, of \$1,000 as tax expense, offset by a reserve of the same amount. If the taxes of 1917 were \$2,000, there should be a reserve of \$2,000 set up on December 31, 1917, to offset—the actual payment of \$1,000 having been charged to the reserve account. But if the plan quoted were adopted, the charge for tax expense in 1917 would be only \$1,000 and the reserve on December 31, 1917, would also be \$1,000, although there actually existed a liability of double that amount. In 1918 the actual payment of \$2,000 is charged as tax expense, although the real tax for that year is \$4,000, and the balance-sheet shows a liability of only \$1,000 still, in spite of the fact that four times that amount of liability actually exists.

Some persons, especially lawyers, have the idea that nothing counts unless actual money is spent. It is not true that "it is only when the tax as paid is charged against the reserve that invested capital is reduced." The reserve is a liability and as such it reduces the total of the net assets as much as if the tax had been paid in advance, instead of being deferred. This is the accounting principle; the expense and the liability are both incurred when the reserve is set up. The fact that the federal government does not allow the deduction of its own taxes as an expense is an anomaly that governs the preparation of the tax schedules but not the accounting procedure.

It is announced that the firm name of Webster & Mills has been changed to Mills & Company, as of March 1, 1919. The address remains unchanged, 42 Broadway, New York.

H. C. Crane, C. G. Trost and H. A. Trost announce the formation of a partnership with offices at 817-818 First National Bank building, Montgomery, Alabama.

Book Reviews

COST ACCOUNTING, by J. LEE NICHOLSON, C.P.A., and JOHN F. D. ROHRBACH, C.P.A. *The Ronald Press Company*, New York. \$6.00 net.

The authors of *Cost Accounting* have produced what the reviewer considers the most satisfactory book on the subject which has come to his notice. It answers the tests with regard to content, arrangement and interesting presentation of the subject. It is a marked improvement in the matter of arrangement over previous works of the senior author. There is much of course which he has presented before, but such material has been skillfully worked into the present book so as to add rather than detract.

The outline of the book is similar to that generally followed in well arranged books on the subject. Briefly summarized, there are discussed in the order stated, cost finding and its functions, the elements of cost, the methods employed, the cost records and the reports rendered. Following this the author takes up the relation of the detail records to the controls, the installation of a cost system and simplified cost finding methods.

The chapters on the accounting under government contracts are most interesting. Cost-plus contracts, which came with the war, may have served most of their usefulness. They may have been good or bad so far as economy is concerned judged from the point of view of the government. They served at least to bring the subject of cost accounting to the attention of a large number of persons and stimulate much interest in it. The authors of the book under review have offered a most complete exposition of cost-plus contracts and their accounting which if only for historical purposes would be decidedly worth while.

The chapter on suspension or cancellation of contracts is most timely and will be seized upon with avidity by the many persons who are in the throes of settling government contracts terminated by the war.

In the opinion of the reviewer, if the statement may be made without detracting in any way from the rest of the book, especially the closing chapters, the most useful portion of the book is that which deals with depreciation and maintenance. Much has been written on the theory of depreciation. Information as to the various bases upon which depreciation is calculated is abundant. Scarce indeed have been data, based on experience, as to the life of physical property. It is in supplying this long felt want, in part, that the authors have made a large contribution. The rates given embrace buildings, building equipment, power plant and power equipment, machinery, small tools and miscellaneous equipment.

Cost Accounting by Nicholson and Rohrbach is a welcome addition to the literature on the subject. It shows not only knowledge of the subject but a careful organization of the material. It is broad in scope and altogether satisfying.

JOHN RAYMOND WILDMAN

Book Reviews

U. S. RECLAMATION SERVICE MANUAL. VOL. II, ACCOUNTING
Issued by the *Department of the Interior*, Washington.

In a letter transmitting the above book for review C. E. Piatt, acting chief accountant, department of the interior, says—

“While the instructions contained therein have to do with the accounting problems peculiar to the reclamation service, there are many practices and principles which are generally applicable to various commercial enterprises.”

This is a modest statement. Though the mass of detail seems fairly bewildering at first sight, the practices are founded on absolutely correct accounting principles, so Mr. Piatt would have been justified in saying that they are applicable to the operating and property accounting of all commercial enterprises, barring, of course, the special forms necessary to complete the systems of corporations and partnerships. In short, the manual is a good and sufficient text-book for any student of bookkeeping. The only wonder is that with the liberal salaries offered at the start by Uncle Sam to ordinary bookkeepers which should attract plenty of competent graduates from business schools, it should be considered necessary to give such elementary instructions as the manual provides in its earlier pages. But as the manual is the result of fifteen years' experience in the reclamation service we must assume that F. L. Cavis, chief accountant of the reclamation service, knew what he was about when he compiled it.

The manual is divided into four parts.

Part I, general accounting, begins with definitions of the terms used in the book, classifying and explaining in detail the use of every account, and ending with instructions for the proper auditing of the accounts by the examiner. Auditors in civil life will be interested to know that the examiner may require his questions to be answered under oath; and that if test checks of material on hand are unsatisfactory, he is directed to make a complete inventory. Uncle Sam evidently considers that auditors shall be responsible for the inventories!

Part II covers fund accounting, which serves to connect the work done with the appropriations made by congress.

Part III covers cost and property accounting, with an exhaustive list of property accounts and forms.

Part IV, forms, contains the list of forms to be used for apparently every conceivable purpose, even to the proper form to be used for applying for leave of absence and the acceptance of resignations.

In addition there are some thirty pages of fine print containing a classification of items in detail comprising the various cost keeping accounts and reports, and an excellent index which should make it go hard with any careless employee who fails to use the right form or makes an entry in the wrong account.

There is an interesting statement in regard to repairs and replacements on page 246 which seems to throw a clear light on the continual struggle between modern and antiquated accounting methods going on in the government service. After defining correctly the difference between a

repair and a replacement, the manual instructs the bookkeeper nevertheless—

"In the case of structures (completed and in operation), the cost of both repairs and replacements of a canal or a structure will be included in the operation and maintenance cost for the current year. . . . It is not considered practicable in reclamation accounting to create a reserve for future substitutions or replacements."

We are not told why it is not practicable, but one may hazard a guess that here the old method of turning back to the treasury all unexpended balances at the close of the fiscal period prevails. The service is apparently not permitted to retain the reserve that might and should be created out of the current rates to provide for depreciation. Then either the current rates will not contain that element of operating cost, and the present consumer will thus benefit at the expense of the future, or if the rate is fixed to cover depreciation, the funds so created will be turned back into the treasury, and future replacements must be paid from new appropriations. If the current rate does not include depreciation, it also follows that either the consumer or the taxpayer must bear the burden of replacements in the years when they become necessary. What with the consumer's congressman bent on keeping the rate down to "actual cost," and other congressmen criticizing the growing appropriations required for replacements, the lot of the reclamation service is rather a hard one. It is gratifying to note that the accounting officers fully grasp the subject, however, (as is shown by the ample and careful provision made for depreciation of equipment during construction) and one may hope that in time congress will be brought to an understanding of it.

W. H. L.

OFFICE MACHINERY AND APPLIANCES, by LAWRENCE R. DICKSEE.
Gee & Co. London. Ten shillings and sixpence net.

Any book dealing with the subject of office equipment must either treat the matter in an abstract and general way or run the risk of appearing to be a special pleader for certain appliances. The recognized standing of Professor Dicksee is so high in the profession, however, that his opinion in regard to various kinds and makes of machinery is above accusation of advertisement and what he has to say is worth reading. In the volume before us he discusses many of the best known appliances and his views are peculiarly interesting to American readers because they reflect the opinion of a foreigner on the subject of American products—most of the modern office appliances are of American origin.

If any one wishes to learn the uses of a rather wide range of appliances written by one who thoroughly appreciates the advantages of modern office equipment he may find what he wants in this little volume by Professor Dicksee.

The Journal of Accountancy

Official Organ of the American Institute of Accountants

Vol. 27

MAY, 1919

No. 5

Some Phases of Capital Stock

BY WILLIAM A. PATON

Much has been written about the significance of certain elements of corporate proprietorship and the proper accounting treatment for them. Stock discounts and premiums, stock authorized and stock outstanding, unissued, donated and treasury stock—all these phases of capital stock have been so fully discussed in accounting texts and special articles that it would seem as if the subject should be exhausted. An examination of these discussions, however, discloses the fact that either some of these matters are not fully understood or, at least some of the generally accepted methods of accounting for certain subsidiary items of capital stock ignore important aspects of the situation. It is the purpose of this article to emphasize these neglected considerations and to raise a question as to the propriety of certain doctrines and practices which at present find common endorsement among accountants.

THE TREATMENT OF STOCK DISCOUNTS

It is not long since accounting opinion was somewhat confused as to the real significance of stock discounts. The unfortunate convention of listing such discounts among the assets was in part responsible for this confusion. When an item is always found in the asset column and is combined with real assets to obtain a total of assets figure, it is easy for the accountant as well as the layman to slip into the habit of viewing the item as an asset, even though of a somewhat suspicious character. It is possible even among current discussions of the subject to find statements which suggest that discounts are related in some way to the asset category (with note and bond discounts such erroneous implications are common), and occasionally the opposite error is made and

the term loss is wrongly applied to a stock discount. It is now generally recognized, however, that a stock discount is neither an asset nor a loss, but is rather a valuation item—an offset to a capital stock figure which is largely nominal as far as the balance-sheet is concerned. The par of the capital stock in any case less the amount of the discount represents the actual investment—original proprietorship. The discount on stock account, then, is really no more than a section of the capital stock account, and the two accounts should always be read in conjunction to determine the status of the proprietary equity.

In other words, stock discounts really belong to the proprietary and liability side of the balance-sheet; and to bring out this fact many accountants urge that such items be listed as deductions from capital stock instead of being placed among the assets. This is a highly commendable practice, for in this way the par value of the stock may be retained in the balance-sheet for what that fact is worth, the actual amount of the original proprietary investment is shown and the stockholder or other person interested is not deceived as to the real situation.

It is in the latter treatment of stock discounts in the accounts that the commonly accepted doctrine is somewhat questionable. It is generally insisted that such items should be written from the books as soon as sufficient income is available to absorb them, or at any rate in a few years. Let us consider the nature and consequences of such procedure.

If discounts are written off at all legitimately it must clearly be done by charges against some proprietary equity account and not a property account. Conceivably these charges might be made to capital stock itself, gross revenue, net revenue or some form of surplus. That is, since a stock discount is an offset to a gross proprietary figure, it can be extinguished only by a charge against some positive proprietary item. To dispose of a discount by a charge to capital stock would, of course, be merely a reversal of the accounting procedure which set up the discount; and if there was adequate reason for bringing such an item into the accounts in the first place it would be unreasonable to write it off by such means. The elimination of discounts by charges to gross revenue is out of the question since such procedure would disturb the integrity of the net revenue figure, in that it would virtually mean the transfer of an item of gross revenue directly to the

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capital accounts. If discounts are to be written off, then, the concurrent charges must be to current net income or accumulated income.

But what is the effect of such accounting procedure? Writing off discounts in this manner obscures two of the most important facts which a balance-sheet should show: (1) original proprietary investment (including additions made subsequent to the period of organization) and (2) accumulated earnings.

Adams, in *Railway Accounting*, says:

The fundamental balances to which all accounting records contribute . . . are four in number, namely, the balance which measures the cost of the property, the balance which measures net operating revenues, the balance which measures the current surplus or deficit, and the balance-sheet statement of accumulated profit or loss. . . . They are guides for the judgment of the investor and a measure for those who desire to know the degree of prosperity which has attended the operation of a property. . . . The degree of confidence which may be placed in the integrity of the four balances named is one of the accepted tests of sound accounting.

Neither of these highly significant balances can be determined from a financial statement if any stock discounts have been written off. As stated above, when stocks are issued below par and par is retained as a balance-sheet fact, the original investment can be determined only by deducting the amount of the discount from the total par value of the outstanding capital stock or, in other words, by reading the capital stock and discount on stock accounts together. If a stock discount is eliminated by charges against income the balance-sheet certainly does not show the amount of the investment or the extent to which earnings have been retained in the business. Total proprietorship is still correctly stated, it is true, but the separation of the two important divisions of the proprietary equity is not maintained.

A simple hypothetical case should perhaps be given to make the discussion concrete. Suppose a company organizes with a capital stock of \$100,000, par, and that all of this stock is issued in exchange for cash, commodities and services having a value of \$70,000. In summary form the balance-sheet would appear as follows:

Property	\$70,000	Capital stock	\$100,000
Discount on stock. 30,000			
	<hr/>		<hr/>
	\$100,000		\$100,000

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Suppose further that in the course of a few years the company retained profits in the business totalling \$50,000. The balance-sheet (assuming that no new equities have appeared) would show at this time:

Property	\$120,000	Capital stock.....	\$100,000
Discount on stock.	30,000	Surplus	50,000
	<hr/>		<hr/>
	\$150,000		\$150,000

If the discount items were now extinguished the statement would appear as follows:

Property	\$120,000	Capital stock.....	\$100,000
		Surplus	20,000
	<hr/>		<hr/>
	\$120,000		\$120,000

Is this last statement a strictly legitimate balance-sheet? Would not the stockholder who read this balance-sheet naturally conclude that the original investment totaled \$100,000, and that the company had accumulated profits to the extent of \$20,000 when as a matter of fact the original investment was only \$70,000, and earnings retained in the business amounted to \$50,000?

It would surely be admitted that the primary purpose of the balance-sheet, in any case, is to furnish essential information about the financial status of a business enterprise to the manager, present and prospective stockholder, creditor and other interested parties; and it appears from the foregoing that the elimination of stock discounts is a practice inconsistent with this purpose. Undivided profit to the stockholder is one of the most significant figures appearing on the balance-sheet, and he bases his decision with respect to his investment to no small degree upon the fluctuations in this figure. It is evident that entirely erroneous conclusions regarding the success of an enterprise between years might be drawn if an accounting procedure such as that shown above is followed. A few individuals may know the facts, but the great body of investors is likely to be misled.

Balance-sheets are by far the most popular form of financial statement. The balance-sheets of leading companies are widely circulated, and are eagerly read by investors. Further, the manager often depends largely upon the balance-sheet for his

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general impressions of the financial condition of his enterprise. In view, then, of the many and important uses to which the balance-sheet is put, accounting methods which tend to disturb the essential elements of this statement are at least questionable.

The integrity of surplus in particular is a matter of importance. In adjusting the rates of public utilities accumulated earnings constitute a highly significant consideration.

Although the integrity of the surplus figure is a matter of special moment in the case of public utilities, the rules of the interstate commerce commission as stated in the classifications of 1914 permit stock discounts to be extinguished by charges against either current income or surplus. Income account No. 555, "stock discounts extinguished through income," is charged with "amounts definitely appropriated from income to reduce or extinguish the amount of discount on capital stock issued by the accounting company;" and profit and loss account No. 616, "stock discounts extinguished through surplus" is charged with amounts appropriated from surplus for the same purpose.

The adjudication of disputes between capital and labor may often involve reference to accumulated corporate earnings. The present revenue programme of the federal government provides for a tax on undivided profits under certain conditions. Any accounting practice, accordingly, which covers up or obscures surplus is of doubtful propriety.

It should be noted that writing off stock discounts is not the only practice which disturbs surplus. Surplus is often subdivided into a dozen or more accounts, is obscurely or improperly labeled, and is scattered promiscuously among the items in the liability side of the balance-sheet in such a way as quite to bewilder the average layman.

It might be objected that it is not essential that surplus and original proprietorship be segregated in the balance-sheet, since the manager or investor in any case is able to gauge the success of the enterprise from the data exhibited in the income sheet, and, if he cares to penetrate further into the dark intricacies of the financial status of the enterprise, an examination of the original entries and detail accounts will disclose any added information desired. It is true that an intelligent examination of income sheet and balance-sheet in conjunction by a person with some knowledge of accounting would serve to explain the dis-

appearance of a stock discount item and a reduction in surplus of a like amount (provided only that the surplus account were appended to the income sheet, however); but the difficulty is that the person interested is usually not sufficiently versed in accounting to trace such a technical matter through the various statements. Further, as was stated above, the balance-sheet is a distinct statement of financial condition, and it may be read by a great many present and prospective investors who pay very little attention to any other data. Examination of original entries and accounts is usually out of the question. The summary statements of income, surplus, assets, original proprietorship and liabilities are prepared for the very purpose of obviating the need for such examinations. Few, if any, of the interested persons have the time, opportunity or skill to glean the desired information from a mass of original records. Omissions or distortions of essential balances in the summaries, accordingly, cannot be excused on the ground that the correct information can be determined if necessary.

The prevailing attitude as to stock discounts is due primarily to the fact that the accountant is a conservative. He has had to contend with the natural tendency of the business manager to overstate values and, consequently, profits; and he has come to view such items as discounts with suspicion.

It is interesting to note how effectually this tendency has been checked by the recent income and excess profits tax legislation. This legislation has probably done more in three or four years to develop among business men conservatism in accounting methods than the efforts of a generation of accountants. For example, the business man is now willing, even anxious, to depreciate anything and everything.

This attitude is due in part to the convention of listing these valuation items among the assets, as was stated above; and it is also due to the fact that discounts on securities have so often been improperly disposed of in corporation accounting by means of charges to the property accounts. But if frankly labeled, and especially if handled in the balance-sheet as a deduction from capital stock instead of being listed among the assets, there is no good reason for viewing security discounts with suspicion. Items of undivided profits and stock discounts may well appear concur-

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rently on the same statement, and indeed should so appear if it be admitted that the balance-sheet should show both original proprietorship and accumulated earnings.

What has been said here about stock discounts may be applied in principle to premiums on capital stock. Such premiums are a part of the original investment and should be treated in the accounts as a permanent adjunct of the capital stock account, being carefully distinguished from income or accumulated surplus. It is interesting to note that accountants are almost in unanimous agreement with this statement of the case as to premiums; and this state of opinion is an added argument for a change of sentiment on the treatment of discounts.

Thus far it has been assumed that it is essential that stock discounts be introduced into the accounts whenever securities are issued below par. As a matter of fact it would be quite possible to record all the essential facts of original investment without entering discounts. If capital stock were listed at the amount of the actual investment, or, in other words, if par value were not used as a basis of accounting for securities, there would be no occasion to record the amount of the discount in any case. And while it is not intended here to insist upon the point as a matter of great consequence, it should be emphasized that the importance of par value as an accounting fact has been unduly stressed. It is certainly possible (if legal) to record proprietorship at the amount of the actual investment without any reference to a formal valuation. In the case of a partnership, for example, the proprietary equities are handled on the basis of actual valuations. Further, it is now not uncommon (in states where this practice is allowed) for a corporation to organize without stating any par value for its capital stock. Certainly it is true that corporate equities having no par can be handled conveniently. Dividends can be stated as dollars per share or as a percentage of actual proprietorship instead of as a percentage of par. Indeed, percentages on par are very likely to be misleading, since such rates may bear little relation to actual income rates. The investor is inclined to attach an altogether undue importance to par value, and this is due in large measure to the fact that the formal rather than the actual proprietary investment is listed in the balance-sheet under the head of capital stock.

It is not intended to deny the legal significance of par value, but the fact that par has a meaning in certain cases does not justify its inclusion in the balance-sheet. The balance-sheet, it should be remembered, is in essence a statement of asset and equity facts, and need not cover all other aspects of the condition of the business enterprise. If par is more likely to deceive than instruct it may well be omitted. Par value usually appears on the stock certificates, in the articles of incorporation and in the minutes of the incorporators' and directors' meetings: hence there is no danger that the fact will be lost.

On the other hand it is entirely rational to record stocks at par provided the proper offset (or adjunct) accounts are set up, correctly labeled and retained as long as the main capital stock accounts. The use of valuation accounts is a firmly established part of modern accounting practice, and although such accounts add to the complexity of the accounting structure they need not cause misstatements or misrepresentations if properly handled.

Summing up the foregoing discussion, it may be said that stock discounts either should not be introduced into the accounts in the first place or, if brought in, should be retained as long as the original stock issue involved is not disturbed. If such discounts are written off, total proprietorship is still correctly stated, but the two important classes of proprietorship, original investment and accumulated surplus, are obscured, and the resulting balance-sheets do not show accurately the essential facts in which the investor or other person is interested.

In the case of discounts on notes and bonds, where a discount is the difference between actual investment and a contractual sum returned at a specified date, much more important questions of principle are involved. A discount of this type measures a part of the total interest accruing during the life of the security, and should be accumulated by charges to net revenue and not to surplus, for otherwise net proprietary income will be incorrectly stated in each accounting period. It should be noted that on this point present accounting practice and opinion are not always sound.

THE SIGNIFICANCE OF TREASURY STOCK

The capital stock authorized by the incorporators may be for almost any amount, there being practically no legal restrictions on such authorizations. Capital stock authorized, therefore, is not

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an accounting fact in the strict sense; and according to the best methods of accounting the record of capital stock begins with stock subscribed. This procedure keeps unissued stock entirely out of the books of account. Whether recorded in the accounts or not, it is generally agreed that unissued stock is not an asset in any sense, and if brought into the books should be viewed as nothing more than an offset to total authorized capital stock. Writers on accounting, however, nearly always distinguish sharply between unissued stock and treasury stock, so-called. Unissued stock, it is admitted, represents merely the authorization of the incorporators. It may never be issued and, although a possible convenience in case of future expansion, it cannot be said to constitute an asset. Treasury stock on the other hand—especially in certain circumstances—is held to be a bona fide asset. It seems to the writer that although there are certain differences between unissued stock, donated stock and treasury stock in the more narrow usage (stock called in according to prearrangement or bought by the issuing corporation on the market), there is no reasonable basis for the fundamental distinction commonly drawn. These items are not assets, in any circumstances; and such distinctions as exist between them are of a relatively superficial character so far as the statement of the financial status of the enterprise in any case is concerned. From the standpoint of the balance-sheet it is virtually no greater error to apply the term treasury stock to unissued stock than to stock once issued for actual property and later bought by the corporation from the individual holder for cash. This view is not in agreement with prevailing opinion, but it is believed that a careful analysis of the situation will substantiate it.

Let us note first the various circumstances in which the stock of a corporation once outstanding finds its way back into the possession of the issuing company. In some cases capital stock once issued in a bona fide manner is donated, or returned to the corporation without compensation. Such a transaction is usually prearranged, and its purpose is to make the stock involved fully paid so that it will sell readily when reissued to raise working capital. Such is the psychology of the market that stock which carries the legend "fully paid and non-assessable" sells more easily to the investing public than the assessable variety. Further, in many states stocks cannot be issued, originally, below par. But

the laws are rather lax on this point and if the stock is once issued at par "for value received"—even if the property received is considerably over-valued—it can be donated to the corporation by an interested stockholder and reissued for any price it will bring. Some person, for example, puts in a tract of land, a factory, a mine, a patent right or other property at a nominal valuation and later returns for re-sale a part of the stock issued to him in exchange. Conceivably such a situation might arise even if the value of the original property were not overstated, since the insiders might find it necessary to make some sacrifices in order to secure the funds essential to the successful initiation of the enterprise.

Stocks are often issued which may be called under certain conditions, and when an issue is brought in by call (adequate payment is, of course, usually made to the stockholders) it constitutes treasury stock unless or until the issue is formally retired. In other cases the directors may decide to reduce the stock outstanding by buying shares in the open market, using for this purpose current corporate funds available. Any one of several reasons may be responsible for such a decision. The corporation may be a wasting asset enterprise, such as a mining company, and it may take this method of cancelling proprietorship and reducing cash accumulations. Or certain interests having immediate control may desire to eliminate other interests by buying them out. The common stockholders, for example, may decide to use certain funds to accumulate an outstanding issue of preferred stock carrying a high interest rate, for the purpose, perhaps, of replacing the issue in whole or in part by a security carrying a lower income charge.

Whatever the particular situation may be, the effect upon the balance-sheet is essentially the same in each case. The corporation has come into possession of some of its own stock, and this stock, instead of being an asset, is virtually a deduction from the outstanding capital stock, whether formally retired or not.

To make the argument emphatic, let us further consider, for illustration, the case of stock bought outright on the market for cash. If it can be shown that such stock is not an asset when in the possession of the issuing corporation, it surely follows that

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capital stock held by the issuer should never in any circumstances be considered a property item, since stock so purchased is the type most strongly urged as having an asset character.

Suppose that the balance-sheet of the X Company at a certain date stands as follows :

Mine	\$600,000	Capital stock.....	\$500,000
Other assets	150,000	Surplus	250,000
Cash	250,000	Liabilities	250,000
<hr/>		<hr/>	
\$1,000,000		\$1,000,000	

At this time the directors vote to use the available cash up to the amount of \$210,000 to purchase the stock of the corporation on the open market from miscellaneous stockholders. Let us assume that this authorization is carried out and, for convenience, that all the shares purchased are secured at a price exactly equivalent to the book value as shown in the above balance-sheet.

This coincidence of book value and market prices would never, of course, exist, particularly in a series of sales covering a considerable period. If the stock were secured for less than book value the difference would be a credit to surplus; and this would mean that the equities of the remaining stockholders were somewhat increased. On the other hand, if a price higher than book value were paid, the excess would be a charge to surplus; and this procedure would be to the disadvantage of the remaining stockholders.

If the amount of stock bought in this way is charged to treasury stock, and the balance-sheet is prepared in the conventional manner, we have the following :

Mine	\$600,000	Capital stock.....	\$500,000
Other assets	150,000	Surplus	250,000
Treasury stock...	210,000	Liabilities	250,000
Cash	40,000	<hr/>	
<hr/>		\$1,000,000	
\$1,000,000		\$1,000,000	

Is the stock thus secured an asset of the X Company? Is it not rather a deduction from capital stock outstanding (and surplus) which might be listed on the right side of the balance-sheet as such a deduction, or even might be charged directly to the capital stock and surplus accounts, thus reducing both sides of the balance sheet by \$210,000? In other words, has not the company

used \$210,000, not to buy an asset, but to reduce its outstanding capitalization even if no formal change in this capitalization has yet taken place?

Some might admit that the item of treasury stock should only be listed at par, \$140,000, since par is the basis for the capital stock entry on the other side, and that the difference between this figure and the price paid, or \$70,000, should be charged to surplus. It surely could not be insisted on any logical basis, however, that for the \$210,000 actually paid an asset worth only \$140,000 is obtained, and that the balance is an offset to surplus. If this item of treasury stock is an asset at all it should be charged at the full purchase price.

Suppose now that the directors of the X Company formally vote to reduce the outstanding stock by the amount of the recent purchases, that the stock certificates are cancelled and that the entries are made which give effect in the accounts to this action of the board. The balance-sheet will then stand as follows:

Mine	\$600,000	Capital stock.....	\$360,000
Other assets	150,000	Surplus	180,000
Cash	40,000	Liabilities	250,000
<hr/>		<hr/>	
\$790,000		\$790,000	

Total assets are now reduced by \$210,000 (if it be assumed that the treasury stock item is an asset) and this is done by a formal act of the directors, by making entries giving effect to the reduction and by marking certain certificates cancelled. Has the corporation lost anything of any value? Is any stockholder's equity reduced? Instead, is this not simply the formal completion of a stock retirement which was made effective as far as the balance-sheet was concerned when the stock first came into the possession of the X Company?

A modification of this illustration will serve to show further the unreasonableness of viewing stock in the hands of the issuing company as an asset. Suppose that the directors of the X Company do not have the stock certificates cancelled as purchased, but that more and more stock is bought up as funds become available through the wasting of the mining property until the property is practically exhausted and stock to the amount of say only \$50,000 (par) remains in the hands of individual stockholders. Assuming that the book value per share remains unchanged (as

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compared with the preceding statements), that the price paid is in each case equivalent to this book value and that other assets and liabilities are the same as before, the balance-sheet will now appear somewhat as follows:

Mine	\$100,000	Capital stock.....	\$500,000
Treasury stock...	675,000	Surplus	250,000
Other assets	150,000	Liabilities	250,000
Cash	75,000		
	<hr/>		<hr/>
	\$1,000,000		\$1,000,000

If it is still insisted that this treasury stock is an asset, one is forced to the conclusion that the X Company still owns property worth \$1,000,000 in spite of the fact that its mining property has declined from a value of \$600,000 to \$100,000 and has been replaced with nothing but the company's own capital stock.

Carrying the illustration still further, it might be assumed that the original property was finally entirely exhausted, that sufficient current assets were used to liquidate the liabilities and that the remaining funds were used to buy up the stock still owned by individual members of the corporation. This illustration is, of course, purely academic, since a corporation could not legally exist with no membership but itself. The balance-sheet might then appear:

Treasury stock ..	\$750,000	Capital stock	\$500,000
		Surplus	250,000
	<hr/>		<hr/>
	\$750,000		\$750,000

It is surely evident in this case that the treasury stock item is merely an offset to capital stock and surplus and is in no sense an asset. The X Company no longer has any assets and even before the stock certificates are cancelled has virtually ceased to exist as far as the balance-sheet is concerned.

But, it may be argued, treasury stock may be sold for cash as readily as any property item, and anything which is readily salable is surely an asset. This statement is typical of the careless reasoning concerning treasury stock which is responsible for the present inaccurate views of the case. The purchase of outstanding capital stock by the issuer does not represent an exchange of assets, as is implied in this kind of statement; and similarly the reissue of such stock does not involve an asset

exchange. Instead, such transactions affect both sides of the balance-sheet. The original issue or the reissue of capital stock is not the sale of an asset; but such transactions, from the standpoint of the immediately preceding balance-sheet, represent new investment. New assets and new equities come into the business.

It may still be urged, however, that the law recognizes the right of a corporation to hold its own stock; that this is not an unreasonable situation particularly in a case where there are several distinct issues of capital stock and a part of one issue is bought up and held by the issuing corporation; and that such stock is as much a part of the company's property as are securities in other corporations. This point brings us to the heart of the matter. True, a corporation may legally hold a part of its own stock; cheques for dividends on this treasury stock may be actually made out by the proper officers and may be deposited by the company—in fact the whole formal rigmarole may be completed; but it should be insisted that these transactions are purely formal and have no real effect upon the financial condition of the company. The law carries the legal fiction of the corporate entity farther than the accountant can safely carry it. In certain situations the accountant must brush aside this fiction (which has a perfectly proper significance in other ways) in order to get at the realities of the case. For accounting purposes transactions between the corporation and its own members must be sharply distinguished from transactions with outsiders. Unless this distinction is carefully made it is impossible to avoid misconceptions. Can a corporation include part of its own stock with the total of its actual property as an asset? This would mean counting as property a liquidated right in the business itself.

It should be admitted that the fact that a corporation has stock authorized which can be issued to secure additional funds when needed may be an advantage, since new authorizations may require a special meeting of the stockholders, changes in the articles of incorporation, etc. Further, it might even be admitted for the sake of argument that stock once issued and held in the treasury may, in certain circumstances, have some slight advantages over authorized but unissued stock in case of reissue. But this fact would not in the least justify calling treasury stock an asset. An advantageous condition does not necessarily signify an asset, unless one is using the term asset in a loose sense which

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has nothing to do with accounting. A bank's right to issue currency may be an advantage—one of the many necessary conditions to successful business operation—but a bale of notes fresh from the press in the hands of the issuing bank is worth simply the cost of manufacture. The fact that a corporation can borrow needed current funds on its promissory note or by issuing bonds is an advantage but not an asset. A company in certain circumstances can assess its stockholders, but this possibility is not an asset, although the funds received when the assessment is called constitute an asset. In other words it is entirely illegitimate to count as an asset any condition which merely makes possible or convenient the raising of capital.

A word might be added with reference to the distinction between "dead" and "live" treasury stocks and bonds. As Lyon points out so effectively in *Capitalization* this distinction is purely a specious one. The fact that in one case a security is stamped "cancelled" and in another "held for sinking fund," means little or nothing so far as the balance-sheet is concerned; and Lyon urges that these distinctions are misleading in other ways and might well be abandoned. Certainly from the accounting standpoint the securities of a company, either stocks or bonds, are always virtually dead when held by the issuer.

It would probably promote intelligent interpretation of the balance-sheet if treasury stock items of all descriptions were excluded from the balance-sheet proper and, if presented in the summary financial statements, were listed as foot-notes or discussed in narrative addenda. The term treasury stock is in itself misleading, and when listed as an asset it will certainly deceive the average stockholder. If brought into the balance-sheet such items should be distinctly labeled as valuation accounts, or listed as deductions from the gross balances of the main proprietary accounts.

Our Newest Navy*

HOW ITS COST IS BEING DETERMINED

BY DAVID POTTER

I

Several hundred vessels of our newest navy—vessels of types from battle-cruiser to mine-sweeper and to torpedo-testing barge—are being constructed at more than a score of civilian shipyards. These vessels are being built, so far as concerns matters of cost, upon a basis of their actual cost plus a profit on such actual cost.

The administration of the matters of cost under these cost-plus-profit contracts has been entrusted by the secretary of the navy to a group of officers called the compensation board. In accordance with a nomenclature first used by the bureau of supplies and accounts, the name "cost inspection" has been given to the work performed under the cognizance of the compensation board. This cost inspection has already attracted the earnest attention of shipbuilders, of producers of raw materials, of economists, of financiers, of fiscal officials and of accountants.

Some reasons for this wide interest will be found in a brief account of cost inspection set forth in this article. The cost inspection herein referred to has no connection with any determination of costs arrived at by the United States Shipping Board, Emergency Fleet Corporation, for vessels being built by and for that corporation—the navy is not charged with supervision over the construction or the costs of construction of the vessels of the Emergency Fleet Corporation.

Let him who ventures to read further take heart of grace! Here he shall find no cryptic "graphs" or diagrams, no co-ordinates or abscissæ marking cost-curves better left unplotted. He shall find few arrays of figures, and none of them appalling. Those phrases, melodious to certain ears—interest on investment, deferred charges, shop cost, day rate, piecework, machine rate, non-productive labor—shall ring not at all in these pages. There will here be found almost none of the jargon of the schools of accountancy.

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II

I fancy that every explorer in a new land has a peculiar pride in his discoveries in that land, quite aside from the charm he finds in the contour of its landscape or in the sweep of its rivers. The sense of something achieved that filled the soul of Columbus in his discovery of America, of Cortez in his conquest of Mexico, of da Gama in his rounding of the Cape of Good Hope, must have been well-nigh divine. So, too, Newton's understanding of the significance of gravity, Watt's realization of the potentialities of steam, or Whitney's invention of the cotton gin, was, in its way, almost as soul-satisfying. Hardly less so, to the persons concerned, were the conclusions of Taylor and Gantt in regard to scientific management, and the exposition by Hamilton Church of the advantages of the use of the capacity-factor in the prorating of indirect expense.

Boldly to compare, therefore, the explorations of the members of the compensation board and of the officers of the bureaus with the explorations of other men, perhaps there may be conceded to the officers concerned the right to feel that something has been achieved by their initiation of cost inspection in this country.

The secretary of the navy, by his order of March 22, 1917, and supplementary orders issued from time to time, organized the compensation board—made up of representatives of the line, the construction corps, the civil engineer corps and the pay corps. The department directed the board, first, to ascertain, estimate, and determine, in accordance with the terms of contracts, the actual costs of vessels building or about to be built under contract, with the navy department, on a "cost-plus-profit" basis; second, to decide upon, control, and supervise the execution of all methods necessary to be established to carry out its duties, especially those defined in the contracts for vessels building or to be built upon the "cost-plus-profit" basis.

The compensation board at once requested the bureau of supplies and accounts to call upon officers of the pay corps experienced in accounting to make recommendations as to methods of cost inspection. These recommendations were promptly submitted. After consideration of the various plans proposed, the compensation board formulated general instructions under which cost inspection has since proceeded.

In addition to the indispensable aid of the officers of the regular pay corps, the compensation board has received the self-sacrificing assistance of a group of professional accountants and financiers—able and accomplished officers commissioned in the pay corps naval reserve force and assigned to duty with the compensation board. Officers of the bureaus of steam engineering, construction and repair, yards and docks and supplies and accounts, as well as the jurists of the office of the solicitor for the navy department, have also furnished invaluable help.

III

Prior to March 22, 1917, vessels built for the navy at civilian shipyards were built on a fixed-price basis. A torpedo-boat destroyer, exclusive of armor and armament, used to cost the navy from \$550,000 to \$900,000. A battleship of the first class cost the navy from \$4,400,000 to \$7,500,000. These prices, of course, represented expenditures made by the shipbuilder for direct labor and for direct material, plus indirect expense, plus his profit. What amount of a shipbuilder's fixed-price to the navy was profit was not known to the navy, although close estimates were made by the navy's representatives. It is not unreasonable to say that even if the shipbuilder knew pretty closely what expenditures he had made for direct labor and for direct material, he did not know how much of his selling price was overhead and how much was profit. The price the shipbuilder fixed to the navy was, at best, only an estimate, the estimate based on "experience" or "judgment," which, being interpreted, too often signified only a guess.

The increasing cost of raw materials and the increasing cost due to high wages paid to employees resulted in the prices named by the shipbuilders to the navy reaching a very high figure. Indications of the inevitable result of these increased prices asked by the shipbuilders from the navy were given again and again by the navy department. These indications were given not only in the form of tenders renewed and rejected, but, specifically, in the form of requests from the navy department to shipbuilders that lower prices should be offered, if possible.

But induced by what they believed to be economic necessity, and inspired by motives of self-protection, the shipbuilders who were accustomed to construct naval vessels continued to make tenders only of prices unacceptable to the navy department. The

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navy department became convinced that the prices demanded by the shipbuilders were unnecessarily high—that the percentages to cover contingencies were greater than the contingencies would actually require.

It is certain that it was the duty of the navy department, while affording shipbuilders opportunity to earn a reasonable profit, at the same time to protect the interests of the government to the fullest extent of its powers. This duty it has performed to the utmost.

By the act of August 29, 1917, under the heading "Increase of the navy," it was provided,

That if, in the judgment of the secretary of the navy, the most rapid and economical construction of the battle cruisers authorized herein can be obtained thereby, he may contract for the construction of any or all of them upon the *basis of actual cost, plus a reasonable profit to be determined by him.*

As brief as the above quoted lines are, they mark the granting of a power to the government which was to result in revolutionizing the financial and accounting features of the construction of naval vessels at civilian shipyards. It is possible, even, that a revolution was begun in the whole economic situation of the shipbuilding industry. The above-quoted provisions of law were supplemented by certain vital provisions in the act of March 4, 1917, the act of October 6, 1917, and the act of July 1, 1918. It is the appropriate provisions of the respective naval appropriation bills which made possible the construction of naval vessels at private shipyards on the basis of actual cost plus an agreed-upon amount of profit.

IV

During the autumn and winter of 1916 and the winter and spring of 1917, the navy department and its duly authorized representatives were engaged in endeavoring to persuade what may be called the "old-line" shipbuilders to agree to construct naval vessels at an acceptable fixed-price. Failing this, the navy department endeavored to agree with the shipbuilders upon a proper cost-plus-profit basis upon which to proceed with the work of construction.

For several years, a considerable amount of ordinary building-erection has been done in America on a cost-plus-profit basis. It is evident, however, to anyone who has knowledge of shipyard work that ordinary building-erection on a cost-plus-profit basis

is a very different thing from the construction of vessels on the same basis. Without entering into details, it is believed that this will be conceded.

Since the beginning of the European war, in 1914, and in a few sporadic instances before that time, certain civilian steamship companies had had vessels constructed at civilian shipyards on a so-called cost-plus-profit basis. The word "so-called" is used advisedly, since checking of such costs, either by the shipbuilder or the steamship company, was little more than nominal. The steamship companies had no, or at least very inadequate, machinery for verifying the records of cost presented by the shipbuilders. Further, except for approximately correct records of direct labor and direct material charges, the records of cost of the shipbuilder, as presented to the steamship company for payment, were little better than estimates. In fact, such records had all the joyous freedom from restraint of an ordinary fixed-price contract.

In a word, almost no precedent existed in America for the determination of costs of vessels being constructed on a cost-plus-profit basis.

It may be noted, in passing, that since the beginning of the European war, a vast amount of naval construction has been done in Great Britain on a cost-plus-profit basis. It is interesting to note, further, that such method of construction in Great Britain, on the whole, is not regarded by the British authorities as a success, so far as keeping down costs is concerned. Examination of British records in the case indicates, however, that this feeling of failure is not so much due to the fact that costs have been excessive—if, indeed, they have been—but is due to the difficulties encountered by the British authorities in satisfactorily checking the records of costs. Upon perusal of the British hearings, it is not certain, as a matter of fact, that costs have not been satisfactorily checked; but the feeling of dissatisfaction seems rather to have arisen from the difficulty found by government representatives in making clear to the committees of parliament that costs have been adequately checked.

V

For the purposes of the present consideration, there are four practicable divisions of contracts. The differences between the four kinds are sufficiently well defined in the report of a sub-

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committee of the interdepartmental cost conference. This conference was composed of representatives of the departments of commerce, of war, of navy, of the federal trade commission, the council of national defense, and the war industries board. A sub-committee of the interdepartmental cost conference drew up a report known as "Remarks on contracts" (July 31, 1917). As this is a clear exposition of the advantages and disadvantages of the four different kinds of contracts, some part of the remarks is quoted.

A. THE FIXED SUM CONTRACT

By this is meant the form of contract in which the contractor, generally in competition with other contractors, bids a fixed lump sum for the furnishing of supplies or the performance of services (other than personal) under conditions laid down by the government.

* * * * *

To summarize then—this form of contract has the advantage of simplicity but has the disadvantages of establishing a diversity instead of a community of interest between the government and the contractor, of demoralizing the supply and prices of raw materials, and of requiring increased time to secure competition.

* * * * *

B. THE COST PLUS A PERCENTAGE CONTRACT

This form of contract involves the complication and expense of requiring that the government itself determine, or at least check with considerable accuracy, the actual costs to the contractor.

It enforces upon the government the necessity of supervising the contractual relations between its main contractor and his sub-contractors, for it is to the advantage of the main contractor to make his sub-contracts cost as much as possible.

It offers every inducement for the contractor to inflate his costs, and there are an almost infinite number of ways of doing this; the temptation for the contractor is to inflate both his actual costs in every respect, and the cost he reports to the government.

Assuming that the above objections can be met, it has the advantage of protecting the government from excessive prices without demoralizing the prices and supply of raw materials, and of saving time.

* * * * *

To summarize—this form of contract has the advantages of saving time and preventing demoralization of markets, but has the disadvantages of establishing a diversity instead of a community of interest between the government and the contractor, of involving the government in the expense and trouble of determining or checking contractor's costs, of supervising his relations with sub-contractors and of giving rise to contentions between the government and the contractor that may be very troublesome during the contract and for many years thereafter.

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C. THE COST PLUS A LUMP SUM CONTRACT

In this form of contract the actual cost to the contractor, determined or checked by the government is paid to the contractor, plus a definite lump sum, which, in the judgment of the contracting officer, is a reasonable reimbursement to the contractor for the employment of his services, plant, and organization in producing the desired product for the government.

* * * * *

Once this lump sum has been determined and accepted by the contractor, the contractor is under no inducement to inflate his actual costs, though he may still be tempted to inflate his reported costs to the government. His costs must therefore be determined or checked by the government as in "B," above. Neither is he under any inducement to keep his costs low—in short, in so far as the real costs are concerned, he occupies a neutral position.

* * * * *

To summarize—this form of contract has the advantages of saving time and preventing demoralization of markets. It establishes neither a diversity nor a community of interests between the government and the contractor. It involves the government in the expense and complication of determining or checking the contractor's costs, and may involve some supervision of sub-contractual relations, although not so much as in "B." Assuming that the difficulties in determining the contractor's costs can be met, it appears to be a satisfactory form of contract.

* * * * *

D. THE COST PLUS A LUMP SUM WITH LIMITED PENALTY AND BONUS CONTRACT

In this form of contract a preliminary estimate is made by the contracting officer as in "C," or by the contracting officer and contractor in agreement. A lump sum consideration is fixed by the contracting officer as in "C," on the basis of the estimated cost. The contractor is informed of or agrees to the estimated cost and the lump sum consideration. If the actual cost after the work is done is just equal to the estimated cost, the lump sum consideration is paid, exactly as in "C." However, if the contractor is able to reduce the actual cost below the estimate, any reduction is shared half and half between the government and the contractor, provided that the contractor shall not receive more than a certain maximum. On the other hand, if the actual cost exceeds the estimate, half the excess is carried by the government and the other half is deducted from the lump sum compensation that was the basis; provided again, that the contractor's profit shall not be reduced below a certain minimum.

* * * * *

In this form of contract the contractor is again put practically on a salary and rental basis, but with a penalty and bonus provision that brings about a community of interest between him and the government, so safeguarded that unduly excessive profits to the contractor are prevented and also so as to ensure that he neither loses money on account of his work

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for the government nor finishes without any compensation whatsoever. The contractor has every reason to reduce his actual costs, and so far a community of interest has been established. On the other hand, he has the temptation of inflating his reported costs to the government. It will therefore still be necessary for the government to check or determine costs, as in both "B" and "C."

* * * * *

To summarize—this form of contract saves time and prevents demoralization of markets. It establishes a community of interests between government and contractor. It involves the government in the expense and trouble of determining or checking contractor's costs, but involves no supervision of sub-contractual relations, since the contractor's interests and the government's are identical so far as keeping down costs of sub-contracts are concerned. Assuming that the difficulties in determining contractor's costs can be met, it appears to be a satisfactory form of contract.

* * * * *

The first group of contracts for the construction of our newest navy, as entered into by the navy department, is the cost-plus-ten-per-cent.-profit style of contract. In view of the fact that, as has just been indicated, this contract has been regarded as perhaps the least desirable of the three kinds of cost-plus contracts, from the government point of view, it may be asked why the navy department entered into a cost-plus-ten-per-cent.-profit contract in preference to a fixed-profit-on-a-sliding-scale contract. The answer to such a question is complete and two-fold: first, the cost-plus-ten-per-cent.-profit contracts were formally entered into in April, 1917, and actually were agreed upon by the middle of February, 1917, before as much was known of the relative advantages and disadvantages of the different kinds of practicable contracts as is now known. Second—perhaps the more important reason of the two—the policy of the navy department at that time made the cost-plus-ten-per-cent.-profit contract preferable to all others—in fact, made its adoption inevitable.

VI

Governance is one of the most difficult and delicate arts in the world. In its last analysis, the tools and instruments of administration are persons—hence, machine action can never be counted upon from them. In all important situations, the psychology of human beings must be considered. Governance can, therefore, never be a science, but must ever remain an art. It is hoped that the expression of these facts here will not be found plati-

tudinous in considering the reasons for the adoption of the types of contracts entered into by the navy department with the shipbuilders.

For many years past, the orders placed by the navy department with the principal civilian shipyards for the construction of naval vessels had furnished the very backbone of the "old-line" shipyards' business. Such orders enabled the shipbuilders to stabilize their laboring force, to assure sub-contractors of a reliable market for fabricated articles entering into naval vessels, and to constitute a steady demand for the producers of raw materials. Such orders have been a financial guarantee to the stockholders of the respective shipbuilding companies, since they represented work upon whose completion no such thing as a bad debt existed out of all of the millions involved, because the debtor was the United States government itself. It will thus be seen that the shipbuilders owed a particular responsibility to the navy department and, in fact, owed a very great and very particular debt of gratitude to the navy department because the department had enabled the shipbuilders to carry on their business in good times and bad times alike.

On the other hand, the maintenance of an efficient shipbuilding industry was of primary importance to the navy department, and to the nation. Commerce, industry, and agriculture itself, are alike dependent, directly or indirectly, upon the ships that sail the seas. While our interoceanic commerce-bearers are usually spoken of as negligible in quantity, they are so only relatively to the seagoing vessels of certain other nations and relatively to the vast quantity of goods transported overseas from this country. Actually, the interoceanic tonnage of this country is very great. More important is the fact that our coastwise trade is, by law, carried on in our own bottoms and that these bottoms are, by law, made in America. For the construction of these vessels, a sound shipbuilding industry is essential. It is vital, therefore, that the government, which is only the people itself, should take the necessary measures to sustain, at all times, an adequate shipbuilding industry. As part of this industry, it is necessary that men-of-war should be built sufficient in number and size and quality to sustain and protect the national policies in all parts of the world.

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In harmony with these ideas, it is vital for the navy department to make sure that the price at which naval vessels are built for it by civilian shipbuilders should represent not less than the actual cost, not less than a reasonable profit. While the navy department uses records of costs secured in the course of the construction of men-of-war at navy yards to check up and to correct the claims of civilian shipbuilders, yet, at the same time, it uses the navy cost-records to justify its allowance to civilian shipbuilders of such price as may be agreed upon. In the case of the policy of the cost-plus-profit contracts now before us, the navy department believed it to be necessary—particularly in view of the national and international emergency then existing—to make such arrangements with the shipbuilders as fully to protect the government and not less fully to protect the interests of the shipbuilders. Even more, it seemed necessary to err, if at all, on the side of liberality to the shipbuilders, in order that the work might proceed with the utmost possible dispatch and with the utmost cordiality of feeling.

VII

Having in mind the above outlined considerations as to the protection of the government's interests, and, per contra, the considerations as to the protection of the shipbuilders' interests, the navy department, so far as concerns the construction of new vessels, entered into contracts on a basis of cost-plus-ten-per-cent.-profit. These contracts are of a sort that any disinterested person must concede to be not illiberal toward the shipbuilders. The terms of these contracts allow as actual costs various items which, under ordinary circumstances, are considered only as proper charges against a profit and loss account, and, hence, not reimbursable to the shipbuilder or manufacturer. Some of such items are interest, rent, selling expenses, and taxes of all kinds, excepting those imposed by the United States government. By the terms of the contracts, the cost of these items, plus ten per cent. thereof, must be allowed as part of the compensation to the shipbuilders.

It must be understood that the cost-plus-ten-per-cent. contract was entered into only after very extended discussion between the navy department and the "old-line" shipbuilders, and between both of these groups and the proper committees of congress. If anyone should care to investigate the matter, he would find in-

numerable pages of discussion published in the hearings of the committee on naval appropriations, house of representatives, of the session of 1915-1917. He would there find that the shipbuilders proposed that a contract be entered into on the basis of the actual-costs-plus-sixty-five-per-cent. of the direct labor—this sixty-five per cent. to cover overhead and profit. So evident is it that the adoption of this method would have immensely simplified the tasks of the government in checking costs—since much of the contentious question as to what is or what is not overhead would have been removed—that one may well wonder why this arrangement was not at once agreed to by the department. There were various reasons of policy, as already referred to, but, in addition, there was the fact that the shipbuilders, for the most part, were unable to make clear to the navy department how much of the sixty-five per cent. was profit.

The above circumstance is not so remarkable as one who has not had actual experience with the accounts of even the largest corporation might imagine: I think it is not too much to say that it is only the unusual company which has an accounting system satisfactory to anyone but itself, or which can clearly show to outsiders or even to its own officials what are or what are not the actual costs of its own product. The hearings above referred to would make clear to anyone who should read them that the navy department and the shipbuilders' discussions were at cross purposes, or, at least, that their points of view could not, at that time, be made to harmonize as expressed in the terms of any other form of contract than the one finally adopted: viz., contracts upon a basis of actual cost plus ten per cent. profit thereon.

It is worth while noting that the cost-plus-ten-per-cent.-profit form of contract soon gave way to the cost-plus-fixed-profit form. As a matter of fact, only a relatively few of the total number of vessels have been constructed under the all-inclusive cost-plus-ten-per-cent.-form—by far the larger number now being built under the superior cost-plus-fixed-profit form. Of this, more hereafter.

VIII

Examination of the terms of a contract for the construction of ships on a basis of cost-plus-profit will show that the compensation board, as representatives of the navy department, is charged with four distinct sets of duties. The first duty is that the com-

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pensation board shall control the method of checking costs and shall ascertain the correctness of such costs. The second duty is that it shall satisfy itself that the prices charged by the shipbuilders for material are the lowest possible market prices obtainable, having in view the necessity for speedy delivery and the necessity for the delivery of material of the proper quality and quantity. The third duty is to determine what additional facilities a shipbuilder must have to carry out naval contracts and to allow the expenditures necessary to construct such facilities or a part of them. The fourth duty is to appraise the value of such facilities after the completion of the contracts.

It will be evident that when scores of naval vessels are being constructed with the utmost possible dispatch and when expenditures will eventually run considerably over \$1,000,000,000, the compensation board, having its headquarters in Washington, can itself do no more than supervise and decide upon the actions necessary to keep account of costs. The task might have seemed almost insuperable except that the navy had already within its organization various agencies which could at once be employed upon matters of cost inspection.

Line officers of the navy skilled in steam-engineering have often been pioneers in all matters connected with marine engines and propelling machinery for vessels. The constructors of the navy are not approached by any part of the civilian world in their knowledge of ship design and of the actual construction of ships. The civil engineer officers of the navy stand, in regard to all phases of civil engineering, in the same position as do the naval constructors in regard to ship construction and the navy engineers in regard to propelling machinery. The fourth group of officers in the navy possesses a kind of knowledge even more necessary for the proper conduct of cost inspection. Indeed, without such knowledge, cost inspection could not be conducted. This knowledge is that of the officers of the pay corps of the navy in regard to prices of material, handling of material, and cost accounting.

Thus already equipped with superintending constructors, with inspectors of machinery, with civil engineers, and with cost inspectors, the compensation board was ready to proceed with the establishment of a proper procedure for cost inspection. At each of the shipyards concerned, the officers above referred to were formed into a cost inspection board. The respective cost inspec-

tion boards are the instruments through which the compensation board works—the compensation board has no direct communication with the respective shipbuilders, except as such shipbuilders may personally present themselves in the office of the compensation board for information.

At the respective shipyards, the supervising civil engineer is not a member of the cost inspection board, but is a member of a subsidiary board, known as the plant board. Each plant board is made up of a supervising civil engineer and of the resident cost inspector, this plant board being responsible directly to the local cost inspection board, and thence to the compensation board.

It is to be observed that the superintending constructor is responsible for matters relating to fabrication of hulls of vessels; that the inspector of machinery is responsible for matters relating to the machinery of vessels; that the civil engineer (as a member of the plant board) is responsible for matters relating to construction of buildings, building ways, etc., and that the cost inspector is responsible for matters relating to the actual inspection of costs and to the proper records and reports appertaining thereto. Each of these officers is responsible for his own group of work, but each accepts the information acquired by the others as being as authentic as his own. They meet together for final settlement by themselves, sitting as a cost inspection board, of such matters as can be agreed upon, or for making final recommendation from themselves, as a cost inspection board, to the compensation board at Washington, which latter board is the final board of decision.

Observe, also, that each of the members of the cost inspection board has a competent office force. The persons attached to the offices of the superintending constructor and inspector of machinery are skilled draftsmen, and similar persons, suitable for design and inspection of hull material, or of machinery material, as the case may be. Of particular interest is the constitution of the cost inspector's office. His officer-personnel includes several assistants who have lately been certified public accountants or have had similar experience, and also includes the usual clerks who have had experience in the accounting offices at the navy yards. The force also includes "outside men," competent to investigate, on the spot, such matters as require correction in rela-

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tion to the number of laborers that may be employed on a given job, or in relation to the methods of handling material intended for use in government work.

The compensation board has necessarily worked through its agents, the cost inspection boards. The performance of duty of these officers has been beyond praise. To their resourcefulness, persuasiveness, and pertinacity, to their resolution and intelligence, the success of cost inspection is largely due. The success of cost-plus-profit contracts depends upon the efficacy of inspection of costs. In the rigorous and thorough-going character of its cost-inspection the navy has been notably fortunate.

IX

It is worth while emphasizing here that the only kind of cost-plus contract under the cognizance of the compensation board is the cost-plus contract for the construction of new naval vessels. This kind of contract is under the cognizance of the compensation board, but the organization of the cost inspector's office, the details of the accounts kept, and all similar matters, are handled by the bureau of supplies and accounts. The officers of the pay corps concerned have, also, the same responsibility to their bureau in regard to the technique of their profession as the superintending constructor and inspector of machinery have to their respective bureaus.

Cost inspection under contracts for repairs to naval vessels, for repairs to vessels seized from the enemy, for repairs to merchant vessels taken over as naval auxiliaries, for the manufacture of ordnance material, for the manufacture of aeroplane parts, for the manufacture of machinery, or for any other repair or manufacturing purposes, is not under the compensation board. Cost inspection under contracts for repairs or manufacture—as distinguished from contracts for the construction of new naval vessels—is under the cognizance of the bureau of supplies and accounts and the bureau of construction and repair, the bureau of supplies and accounts and the bureau of steam engineering, and the bureau of supplies and accounts and the bureau of ordnance, as the case may be.

So far as the observance of correct accounting principles is concerned, and so far as ease and simplicity in their operation go, the form of the contracts for manufacturing work is greatly to be preferred to the form of contracts for the construction of new

vessels. The cost-inspection of manufacturing contracts has been carried on with the same success as has attended the cost-inspection for the construction of new vessels. Since, however, manufacturing contracts are not under the cognizance of the compensation board, the details need not be dwelt upon here. It should be borne in mind, however, that the bureau of supplies and accounts is conducting cost inspection at several hundred manufacturing plants and that such work is distinct from the work of the compensation board.

X

The instructions of the compensation board to the various cost inspection boards, as approved by the secretary of the navy, do not prescribe a standard system of cost-accounting, nor do they authorize, strictly speaking, the keeping of a cost-accounting system by the cost-inspector. The terms of the contract provide "that no changes in the methods or principles of keeping account of costs shall be required, provided the department finds such principles and methods adequate for the determination of actual costs." Unless, therefore, there are found, from time to time, charges against the government account that prevent a true record of costs being kept, no change is made.

This acceptance by the government of the shipbuilders' methods and principles of keeping account of costs was necessary, in the first place, because the upsetting of the shipbuilders' cost-accounting system would have made very grave financial and industrial confusion in the shipbuilders' works, and, in the second place, because of the fact that the government did not have at hand a standard cost-accounting system entirely applicable to civilian shipyards. The standard navy-yard cost-accounting system is complete and works efficiently—it is complete but not entirely satisfactory to the officers of the pay corps of the navy, because of the fact that the peculiarities arising out of the government's system of appropriations prevent a thoroughly satisfactory navy-yard cost-accounting system's being established. As a consequence, since, up to the date of the establishment of cost inspection, the navy had not been concerned, except indirectly, with the cost-accounting systems at private shipyards, a standard system was not at hand that could be established at private shipyards without delay. However, the decisive consideration in this matter was the one first named, viz., that to establish a new cost-

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accounting system in the shipbuilders' yards was to produce, for a vital period, very grave financial and industrial confusion in the shipbuilders' plants.

On the other hand, the experience gained by the officers of the pay corps of the navy from their handling of navy-yard cost-accounting systems had thoroughly equipped them for the understanding of cost-accounting in general. Hence, while the cost-accounting systems at the different civilian shipyards are almost as numerous as the shipyards themselves, and while some of them cannot be said to be satisfactory even to themselves—yet none of these systems has presented any mystery to the understanding of the cost inspection board concerned.

The compensation board, under the instructions of the navy department, therefore, authorized the cost inspection boards at the civilian plants to carry out what it denominated as a selective and corrective check of the contractor's records of costs and of the actual physical transactions he carries on. In other words, the government expressly avoids duplicating the shipbuilder's cost-accounting records. What it does is to have full access to all the cost records, as well as to the physical operations, of the shipbuilder, and to check up by an extensive system of selected matters the correctness of his whole procedure, and to correct by this selective check such inadvertences in the shipbuilder's records or methods of procedure as may be discovered.

XI

In order to expedite the construction of naval vessels, it was necessary that practically all the shipyards concerned should greatly increase their plants—both buildings and equipment. At once, the shipbuilders pleaded financial inability, or, at least, financial difficulty in furnishing such plant extensions at their own expense. So far as such are concerned, the navy department has, therefore, entered into various interesting arrangements.

If the plant extension or equipment desired by the government is of a sort likely to be necessary for the shipbuilder's use in the ordinary conduct of his business in ordinary times, then the navy department pays the shipbuilder, as fast as he makes the expenditure, *not to exceed fifty per cent.* of the cost. This class of allowances is known as special rentals "A."

Five important points are to be noted in this special rentals "A" class. *First*, no depreciation on this class is allowed the shipbuilder, the special rentals rate being in lieu of all depreciation. *Second*, owing to the requirements of the laws governing government appropriations, the value of such special rentals is recorded as a part of the cost of the vessels; for example: if the shipbuilder builds an extension to his foundry at \$100,000, the government may decide that only twenty per cent. of that amount is due to the government's specific requirements; hence, the shipbuilder must pay \$80,000 from his own funds and the government will pay him \$20,000 in addition, thus making up the \$100,000. Therefore, if there are twenty vessels of equal value building at the shipyard, the cost of each vessel will be increased by \$1,000. *Third*, at the expiration of the contract, the government reconsiders its rate of allowance, and, if equity demand, pays the shipbuilder more or less of the special rentals value, or "stands pat" in the matter. *Fourth*, the title to this sort of plant extension becomes vested in the shipbuilder, and not in the government. The *fifth* point to be noted under the head of special rentals "A" is that *no profit* is allowed the shipbuilder upon expenditures made under this head.

If the plant extension or equipment desired by the government is of a sort *not* likely to be necessary for the shipbuilder's use in ordinary times, then the navy department pays the shipbuilder, as fast as he makes the expenditure, the full amount of such expenditures. This class of allowances is known as special rentals "B."

Four points are to be noted in regard to special rentals "B"; *First*, no depreciation is allowed. *Second*, the value of such rentals is carried *in toto* into the costs of the vessels concerned. *Third*, at the expiration of the contract, the government takes title to the property, but the government gives the shipbuilder the option of acquiring title to the property at an agreed-upon price. If the shipbuilder does not offer a price satisfactory to the government, the property remains the property of the government. *Fourth*, no profit is allowed the shipbuilder upon expenditures under special rentals "B."

Under the act of October 6, 1917, additional plant facilities were authorized. These are of the general nature of special rentals "B," *i. e.*, their full value is payable by the government

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to the shipbuilder. However, two important differences are to be noted. *First*, in no circumstances is the value of such plant facilities charged as part of vessels. *Second*, the title to property of this nature vests in the government.

Recapitulating, then, this part of the navy department's arrangements to finance the shipbuilder, we find that plant extensions are financed thus: *First*—special rentals "A"—a fifty per cent. allowance, or less, to the shipbuilder, of the value of the property, the title to the property vesting forthwith in the shipbuilder; *second*—special rentals "B"—a one hundred per cent. allowance to the shipbuilder, the title to the property vesting in the government, but the shipbuilder having the option of purchase from the government; *third*—plant facilities under act of October 6, 1917—a one hundred per cent. allowance to the shipbuilder, but the title to the property vesting definitely in the government.

XII

Bills covering reimbursement by the government to the shipbuilder for expenditures made by him for material, labor, indirect expense, and to cover his profit, are made monthly. Such bills are made up at the shipyard, certified to by the local cost inspection board, then forwarded to the compensation board at Washington for review. The board, if satisfied with the bills, then recommends to the secretary of the navy that they be paid. After receiving the signature of the secretary of the navy and of the chiefs of the bureaus of steam engineering and construction and repair, they are sent for payment to the disbursing officer of the cost inspection board concerned.

It is evident that if payment were made to the shipbuilder only on his monthly bills, he would always have large amounts of money due him from the government, and, hence, would have his available supply of liquid capital much "tied-up" at any given time. To obviate this difficulty—to pay the shipbuilder with the utmost promptness—preliminary payments are authorized to be made on the spot. The shipbuilder can present a material invoice or a labor roll to the local cost inspector, certify that he has actually made the expenditures, and receive reimbursement forthwith from the disbursing officer detailed by the bureau of supplies and

accounts for duty with the local cost inspection board. The shipbuilder is actually paid large sums almost every day within four or five hours after he presents his bill, if he so desires.

The next step authorized by the navy department to finance the shipbuilder was to make reimbursements to him for progress payments made by the shipbuilder to a sub-contractor. Warrant of law for the making of partial payments had been granted by the act of March 4, 1911, but such warrant had not been utilized to its full extent. Under the cost-plus contracts, however, this law has come to a wide range of usefulness. For example: five boilers are ordered by shipbuilder, A, from sub-contractor, B. When one boiler is finished but not yet delivered, a navy representative certifies to the local cost inspection board that the boiler appears to be satisfactory. Payment is thereupon immediately made by A to B for the one boiler, even although it may remain undelivered indefinitely, and reimbursement in the proper sum is made by the navy to A.

The next method of assisting in financing the shipbuilder was authorized by a recent act of congress—urgent deficiency act of October 6, 1917. Under the power of this law, the navy department has authority to advance to contractors any amounts up to thirty per cent. of the value of the contract. Thus, if the shipbuilder makes a contract with a boiler manufacturer in a total amount of \$90,000, the shipbuilder can advance to the boiler manufacturer the sum of \$27,000, and the navy department will immediately reimburse the shipbuilder the \$27,000. However, in order that this privilege may not be abused, the prior authority of the department is necessary for each specific sub-contractor. Also, the sub-contractor is usually required to furnish sufficient security.

Finally, under the act of October 6, 1917, already referred to, the department has authority to make advances to the amount of thirty per cent. of the value of the contracts made with the shipbuilders. Thus, if a shipbuilder had a contract for building one hundred ships at \$1,000,000 apiece, or \$100,000,000, the department could advance \$30,000,000 on such ships. In no case, however, although it has advanced several million dollars to the respective shipbuilders, has the department found it necessary to advance even half of thirty per cent.

XIII

In the early autumn of 1917, an interesting development of the "cost-plus" idea took place. The act of October 6, 1917, made available a considerable sum of money for the construction of additional vessels. It was decided that these vessels should be built on a cost-plus-fixed-profit basis, with a bonus privilege. As intimated in the earlier part of these remarks, where the recommendations of the interdepartmental conference were referred to, a cost-plus-fixed-profit arrangement, supported by a bonus-or-penalty clause, is the best of the possible forms of cost-plus contracts.

In regard to cost-plus-ten-per-cent.-profit contracts, there was once current a rather harsh saying: "The more the contractor spends, the more he gets." Owing to competent cost-inspection, this saying has never been meant to refer to navy work, but has been applied in other directions only. It means, however, that the higher the value of the contractor's costs, the greater the sum of money paid to him as profit, since, by the contractual terms, he must be paid as profit ten per cent. of his costs. In the cost-plus-fixed-profit contracts, quite a different result ensues. The more the shipbuilder spends, the less profit he gets. This happy condition arises from the bonus privilege referred to.

A concrete example, based on the existing form of cost-plus-fixed-profit contract, will make this point clear. The navy department and the shipbuilder agree upon the estimated cost of a vessel—say \$1,200,000. Upon this, the navy department agrees to pay the shipbuilder a fixed profit—say \$120,000. If, however, it is found, upon completion of the contract, that the vessel has actually cost only \$1,000,000, then the shipbuilder receives one-half of the "savings," in addition to his fixed profit. In this example, then, the "saving" below the estimated cost—that is, the difference between \$1,200,000, and \$1,000,000—being \$200,000, the shipbuilder receives one-half of the \$200,000, or \$100,000, this being in addition to his fixed profit of \$120,000. Hence, his total profit on the vessel will be \$220,000. It will be seen that, by this kind of contract, the shipbuilder is keenly stimulated to economy in production, quite unlike the cost-plus-ten-per-cent.-profit contracts. Thus, the cost-plus-fixed-profit-with-bonus contracts may be expressed in a formula: "the less the shipbuilder spends, the more he gets."

Of course, it would be a still more economical arrangement if a penalty feature were embodied in the present contracts, that is, if the vessel exceeded the estimated costs, the shipbuilder's profits should be cut down by one-half the overrun. This would be a move toward an ideal contract. However, the country does not yet seem to have achieved a state of mind to make this ideal form feasible.

It is a clear indication of the great progress in mutual understanding made possible by the stress of war that, in the relatively short period from April, 1917, to October, 1917, the shipbuilders were willing to shift from the original all-inclusive cost-plus-ten-per-cent.-profit contracts to the present vastly more economical cost-plus-fixed-profit-with-bonus-for-savings contracts. They have come to a fuller realization than ever before that they are just as much a part of government as are those of us whose particular duty it happens to be to administer the people's affairs and to see that the laws of the people are carried out. If business men act for the government they act for themselves. If government is ruined by reckless expenditures, business men are ruined. The consequences of defeat in this war would be as hideous to business men as to government. The interests of one are the interests of the other. They cannot be separated. They are the *same* interests. I venture to think that the work of cost inspection, almost as much as any other one thing arising out of this war, has enabled the business world to acknowledge—let us hope forever!—these inexorable truths.

XIV

The savings to the government effected by cost inspection have been very great. Only the merest glance can be given to them here. Amounts saved at the respective "old-line" shipyards, by the correction of actual errors, run from \$10,000 to \$100,000 each month. While the actual number of shipyards under the cognizance of the compensation board cannot be named here, yet the fact may be accepted that the direct savings thus made already aggregate several hundred thousand dollars.

The prevention of the accumulation of improper costs, made possible by the rigorous scrutiny given the shipbuilders' records by the local cost inspection boards, has resulted in economies almost incalculable.

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In addition to keeping down costs in the manner above indicated, the compensation board has been able to make savings of great sums by negotiations conducted direct from its own office. Lower prices for material than prices first offered have often been secured on large items. In more than one case, as much as a million dollars has been struck off from the price of a single class of equipment.

Various decisions made by the navy department, after consideration of recommendations presented by the compensation board, have attracted great attention throughout the country. Among these may be mentioned a ruling that bonuses paid by the shipbuilders to officials of their companies cannot be accepted as charges against naval vessels. Of even wider application is the ruling that no part of federal taxes—income taxes, excess profit taxes, munitions taxes, corporation taxes—paid by the shipbuilders can be reimbursed to them by the navy. Such rulings as these have saved the government very great sums of money and have prevented inflations of a sort whose deteriorative influences on our national economy might have been almost illimitable.

The time is not suitable for giving more details of the great success of cost inspection. An account of notable results may be permissible in the future. But that the navy department's policy has been amply justified in the securing of good-will on the part of shipbuilders and on the part of their employees, to the end that expeditious construction of vessels has been effected, let the commanders of our constantly augmented fleets testify.

Standardization of Printers' Accounts*

BY J. HUGH JACKSON

Through the standardization of printers' accounts the fifth largest industry in the United States has placed itself upon a plane where it will command the respect, if not the envy, of all industries. The national organization of printers and of the allied trades, the United Typothetæ of America, is conducting a three-year campaign throughout the country and has brought about greatly improved business conditions in the industry. Uniform and scientific methods of cost finding have been used for a number of years and are largely responsible for the improved financial conditions in hundreds of printing and allied shops; while scientific methods of estimating, coupled with proper salesmanship training, have been for some time a part of the "three-year plan."

The need for a uniform method of accounting has long been felt. Such a system was completed last year, and the *Standard Accounting System for Printers* was officially adopted at Cincinnati last September by the United Typothetæ of America. The entire United States is now being thoroughly organized, and it is the plan of the three-year campaign not only to make the membership universal among the printers, but to make the practices of the industry as regards cost finding, estimating, selling and general accounting uniform and stable.

The purpose of all accounting is to ascertain, compile and present in a comprehensive manner, for administrative purposes, the facts concerning the financial operations and conditions of a business: this the standard accounting system has been designed to do. In the development of the system many of the best men in the printing industry were consulted, while accountants and advisors in several fields of business activity gave it careful thought or passed judgment upon particular points. The forms, after being carefully prepared, were bound together in a demonstration book, transactions were recorded therein to illustrate the use of the system, and lastly a treatise was written which thoroughly explains the individual books and their relation to the system as a whole.

*Substance of an address delivered before the United Typothetæ of America at the annual convention, Cincinnati, Ohio, September, 1918.

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The records comprising the system are divided into two parts: first, there are the primary books (of white paper) which comprise the actual bookkeeping system; and, second, the accessory records (of buff-colored paper) which support these primary books, or furnish the information from which the entries are made. All the books and records are of uniform size, the sales register, with its columns for departmental costs and credits, being arranged with a short page in order to keep it within the same dimensions as the other books. Each is given a distinguishing symbol, and all consist of the ordinary bookkeeping forms designed to meet the needs of a special industry. The primary books consist of four special column books of original entry and of the ordinary ledgers. The accessory records or books as illustrated in the demonstration book consist of the following:

- Order book (form G);
- Summary of sales for year (form H);
- Statement book (form I);
- Schedule of fixed charges (form J);
- Summary of department costs (cost form 9-H);
- Individual job summary (cost form 2).

The ordinary trial balances and schedules of subsidiary ledgers are used, and a classification of accounts is presented for the guidance of the printer installing the system.

The standard accounting system, it should be remembered, is built around the standard cost finding system, and, wherever possible, the forms used in the cost finding system have been used in building up the accounting system which was to interlock with it. The two cost forms named—the summary of department cost (cost form 9-H) and the individual job summary (cost form 2)—are familiar to practically every printer in America, and these forms constitute the interlock between the standard cost finding system and the standard accounting system as devised. There are certain points in the new accounting system which the committee undoubtedly would have had otherwise, but it was necessary to make them conform with the standard cost finding system already adopted by the national organization.

It is unnecessary, in this brief discussion, to take up in detail the primary books of the standard accounting system. Complete information as to their purpose and use is given in the treatise.

This discussion will therefore be confined to some of the features especially interesting to the printing industry.

In response to a demand among printers for a method of determining the gain or loss for each department in their plant and on each kind of material used a series of "distribution of sales" columns has been provided in the sales register. These columns, when compared with the costs as shown in various other columns in the sales register (and providing the distribution is wisely made) furnish a means of determining the net profit or loss on each kind of material used and in each operating department of the plant. Provision is made on the individual job summary to record not only the exact cost of a production order, but to show the actual or estimated selling price—this selling price to be determined by taking a fixed selling price per hour and multiplying it by the number of hours estimated or actually used to do the work in each department. This sales distribution is provided in detail each month in the sales register and should be carried in summary at the end of each monthly period to the summary of sales for year sheet (form H) provided with the accessory records. In this way the printer can have a consecutive record showing the profit or loss on each department in the plant and on each material used in the business during the entire year. This will enable him to determine what departments, if any, are causing him to lose money.

Three separate statements are provided in the statement book (form I). While prepared only at the end of current and fiscal periods, they are simple in form, and give the information which is essential to the printer. The statement of factory operations (form I-1) analyzes the cost of completed work for the period and gives the cost of sales shown on the income statement. The income statement (form I-2) analyzes the losses and gains for the month or year past and shows what the progress of the business has been. The net profit (or loss) as shown by the income statement is then carried to the balance-sheet (form I-3), and there the present status of the assets, liabilities and net worth of the business is found. If these uniform statements are continuously and faithfully used, information will be obtained that few printers have obtained heretofore.

The schedule of fixed charges (form J) gives the information in regard to depreciation, interest on plant investment, insur-

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ance and taxes that is necessary to aid in determining the productive hour cost on the monthly summary of department costs. The schedule should be prepared at the beginning of the fiscal period and should remain unchanged throughout the year, unless considerable adjustments are to be made. To illustrate: if a large amount of machinery is either purchased or sold or if the inventory is permanently increased or decreased, adjustments should be made accordingly in the fixed charges for the remaining part of the fiscal year.

A schedule of fixed charges is likewise prepared for the month, the amount in each case being one-twelfth of the amount shown on the annual schedule of fixed charges. This monthly schedule furnishes the information from which the journal entry is made charging the operating departments of the plant (and likewise the general ledger controlling account) and crediting the reserve for depreciation, interest on plant investment, insurance and taxes accounts, respectively. These charges are also found recorded on the cost form 9-H, under the fixed charges of the month. While this schedule is not absolutely essential to either the accounting or cost finding systems, it is certainly more logical to prepare this information on a definite schedule than to obtain it for the monthly summary of department cost and for the books of entry in any indefinite way.

The summary of department costs (cost form 9-H) and the individual job summary (cost form 2) are the cost forms necessary to interlock the cost system with the standard accounting system. The information necessary to make out the cost form 9-H is obtained largely or entirely from the books of account, and this form is necessary to determine what part of the expenses as shown on the financial books shall be charged hourly to individual jobs. The cost form 2 (individual job summary) furnishes the entire information necessary to credit the general and factory ledger accounts—this credit passing through the sales register—and therefore determines the amount of credit that shall be made to the departmental and general accounts for work done in the plant. It is thus seen that these two cost forms are essential to tie up the standard accounting system with the standard cost finding system.

The printing industry has long been in need of a means of stabilizing the business, and perhaps this is the most important

single accomplishment of the system. For this purpose a reserve for overhead account has been provided. This account will be debited or credited for the difference between the actual cost of materials and operating expenses charged during the month to the departmental factory accounts (and likewise to the general ledger controlling account) and the value of the completed work and the work in process as credited to those accounts. These entries should be made at the end of each monthly or other closing period. The account is thus the adjustor of monthly cost fluctuations and absorbs the differences between the set-up cost (based on the costs of previous months as shown on cost form 9-H) and the actual cost of the work done during the month. By this adjustment the printer can tell, as explained more fully in the treatise, about how much the set-up hour cost for the present month must be increased or decreased over that of the past month. Inasmuch as the costs recorded on cost form 9-H are averages for twelve months, the costs of a single month will vary from them somewhat.

The reserve for overhead account should be credited at the beginning of each month or other period adopted for a percentage of the sales of the previous month, and a considerable reserve should be kept as a factor of safety—say, for illustration, not less than one per cent. of the monthly sales. When this account is credited the departmental factory accounts and the general ledger controlling account are debited with their proportion of the total amount. At the end of the monthly periods the adjustments of the departmental accounts will be closed into the reserve for overhead account, and, at the close of the fiscal period, any excess over a wise reserve to be kept in the reserve for overhead account may be added to the loss and gain and any deficiency may be made up from it. This feature alone of the standard accounting system will make it invaluable to the printer who installs it in his plant.

While the standard accounting system provides the printer with the means for accurately recording all financial transactions incident to the industry, it is felt that the system, as it now stands, is rather complicated for the medium and small shop. The national committee has therefore considered it expedient to construct a simplified system of accounting, particularly adapted to the needs of the small business, and giving essentially the infor-

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mation obtained for the large plant by the standard system. This simplified system, which the writer has in preparation, will enable even the small printer to direct the detail of his business upon the basis of existing facts, rather than upon uncertain information. When used in conjunction with the standard cost finding system, these accounting systems will give to this great industry a force which will enable it to take its proper place among the other industries of the country.

The Journal of Accountancy

Published monthly for the American Institute of Accountants by
THE RONALD PRESS COMPANY, 20 Vesey Street, New York, N. Y.
Thomas Conyngton, President; L. G. Henderson, Secretary;
Hugh R. Conyngton, Treasurer.

A. P. RICHARDSON,

Editor

EDITORIAL

Accountancy and Law Compared

For some years it has been the practice of THE JOURNAL OF ACCOUNTANCY to comment editorially on the duty of the accountant to render absolutely impartial service to his client and to the public. It is a subject which has so universal an importance that we have made no apology for frequently returning to the attack. There is, however, one feature of the case which has not been extensively discussed in these columns, and this feature has been brought to our attention quite strikingly during the past few months.

Many taxpayers, bewildered by the complexities of tax laws and rulings, have turned to their legal advisors to help them untangle the phraseology of the laws and apply the requirements to their accounts. We have frequently drawn attention to the fact that a lawyer is not the man who can be expected to prepare income tax returns with a satisfactory degree of intelligence. His training and experience are not in any way likely to lead him to a knowledge of accounts, and without such knowledge it is, of course, quite manifestly impossible to undertake the preparation of income tax returns with any chance of an equitable result.

This fact brings us to the point in mind, namely, the fundamental difference between the professional practice of law and the professional practice of accountancy. It is a point which many accountants themselves are apt to overlook. For this reason something should be said to impress upon the practitioners of both professions the basic difference between the two.

Editorial

This may be expressed in many ways, but probably as clear an exposition of the fact as any is to say that the accountant is concerned with facts and the lawyer with theories.

The lawyer employed as the mouthpiece of a client is expected to present the client's side of the question. He is employed as a special pleader, and his presentation of argument is founded upon the desire to obtain for his client that which he seeks. The code of ethics of the legal profession thoroughly recognizes this idea of partiality. Indeed, if the practice of law were to be rid of partiality it is not quite clear how the majority of lawyers could make a living.

The accountant on the other hand is concerned with fact, and he should never be influenced in any way by the desires of his client. He is not expected to make a special plea for anyone. The truth is the only thing which should concern him, and on all questions of fact he should be unwavering. If he be influenced in any way by the thought of fee or supposed faithfulness to the interests of a client, he is in great danger of becoming a charlatan.

The accountant should go about his work with his eye fixed singly upon facts, if there be facts, and when he is compelled into the realm of theory he should still keep clear of the suspicion of susceptibility to influence.

Putting the matter in another way it may be said that neither the lawyer nor the accountant could properly conduct his profession if he were to adopt the principles governing the practice of the other. Confront the lawyer with the necessity of an impartial presentment of facts and you deprive him of the ability to give that special advice and counsel for which he is chiefly employed. Confront the accountant with a requirement to present facts in a light solely or chiefly favorable to a client and you take from him the very foundation upon which the growth of his profession and its value to the community are built.

At the recent semi-annual meeting of the council of the American Institute of Accountants there was prolonged discussion on certain points of ethics, and several new rules were under consideration. The code of ethics of the accounting profession is being constructed slowly and has already attained a fair breadth of scope, but it is evident that the work is not complete. In the future laying together of the rules of conduct which should govern the reputable public accountant it will not be sufficient to

keep the standard merely equal to that of any other profession. The man whose vocation calls primarily for rigid impartiality should have a code of ethics of the highest.

Let the Buyer Beware

Two or three years ago a man representing himself to be an agent of *THE JOURNAL OF ACCOUNTANCY* was active in the middle west securing subscriptions to this magazine and offering all sorts of inducements, such as four or five well known accounting books, as a bonus. His subscription rates seemed to vary from 50 cents up to \$3.00. In fact he did not reject anything that looked like money. This active young man was apprehended and spent a year in Erie jail. About the time of his discharge from prison, reports of similar activities began to arrive from the neighborhood of Chicago, and after a few weeks another arrest and prison sentence followed.

At that time in order to safeguard the public *THE JOURNAL OF ACCOUNTANCY* began to print on its front cover the legend, "This magazine does not employ subscription canvassers." The same wording was later printed on the first page of reading matter.

We have now received word from Waco, Texas, that somebody who seems remarkably like the man already twice convicted has been endeavoring to obtain subscriptions in that part of the country.

Of course, *THE JOURNAL OF ACCOUNTANCY* will do its best to secure the arrest of this contemptible criminal, but at the same time we feel that some duty rests upon the public. When a man without credentials of any kind solicits cash subscriptions to a technical magazine of high standing and offers to throw in all kinds of valuable accounting literature for one, two or three dollars, it does not seem to us that the public which is deceived by such blandishments deserves any great amount of sympathy. If we were not so keen a nation of bargain hunters we would sometimes stop to consider the value of the goods offered to us and make quite sure of the vendor's power to deliver the goods at the price mentioned.

It may be said in reiteration that *THE JOURNAL OF ACCOUNTANCY* does not employ canvassers and never offers any books or other bonus to the subscriber.

Editorial

Vocational Education

The federal board for vocational education has asked all magazines in the country to assist in spreading information as to the activities of the board. We are glad to draw attention to the efforts of the government to provide training for men to whom training is necessary. There is great need for qualified men in the accounting profession, and many of the men returning from service certainly must have the ability upon which to base training which will lead them into this profession. The activities of the federal board for vocational education should be investigated by our returning soldiers and sailors. There are offices of the board in fourteen cities of the United States. The New York office is at 280 Broadway.

American Institute of Accountants

SEMI-ANNUAL MEETING OF COUNCIL

The regular semi-annual meeting of the council of the American Institute of Accountants was held at the offices of the Institute, 1 Liberty Street, New York, at 10:15 A. M., April 14, 1919.

Present:

Waldron H. Rand, president
Adam A. Ross, treasurer
Harvey S. Chase
Hamilton S. Corwin
J. D. M. Crockett
W. Sanders Davies
John F. Forbes
J. S. M. Goodloe
Edward E. Gore
William P. Hilton
J. Porter Joplin
F. W. Lafrentz
W. R. Mackenzie
J. E. Masters
Robert H. Montgomery
Walter Mucklow
Carl H. Nau
Charles Neville
John B. Niven
Ernest Reckitt
E. W. Sells
Herbert G. Stockwell
Edward L. Suffern
F. A. Tilton
William F. Weiss
F. F. White
Arthur Young
A. P. Richardson, secretary

The meeting was opened with prayer.

Minutes of the preceding meeting as printed in the year-book were approved.

Record of mail ballot No. 8 was read and ordered embodied in the minutes.

Report of the treasurer was read and accepted. The report showed total receipts of the general fund from September 1, 1918, to March 31,

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1919, \$18,860.58. Expenditures under appropriations amounted to \$13,170.36. Cash on hand and in bank, \$5,690.22. Investments on hand, \$15,100.00.

The treasurer's report on the condition of the endowment fund showed cash, investments, etc., at September 1, 1918, \$119,373.68. Contributions received in cash and bonds, \$11,746. Sales of *Duties of the Junior Accountant*, \$731.15. Income from investments, bank balances, etc., \$2,971.53. Total, \$134,822.36. Expenditures, \$3,362.63. Balance on hand March 31, 1919, \$131,459.73, consisting of cash and investments, \$129,430.26, furniture, etc., \$2,029.47.

The report of the treasurer of the board of examiners showed receipts, \$2,593.62; expenditures, \$2,266.79; balance in bank and on hand March 1, 1919, \$326.83.

The report of the secretary was read and accepted. This report showed the following changes in membership: Deaths—members, 12, associates, 4; resignations—members, 3; dropped for non-payment of dues—members, 5; expelled—member, 1.

Since the beginning of the fiscal year 12 members and 8 associates had been elected and 2 associates had been advanced to membership.

The report showed that 18 states are using the plan of co-operation in examination proposed by the board of examiners.

The report of the executive committee was read and accepted. It reviewed the labors of the committee in supervising and conducting the affairs of the institute since the date of the preceding meeting of the institute.

The report of the committee on professional ethics was read and accepted.

The report of the committee on arbitration was read and accepted.

The report of the budget committee was read and the appropriations called for were duly authorized. Additional appropriations of \$2,800.00 were authorized out of current revenue of the general fund and \$650.00 out of current revenue of the endowment fund.

The report of the committee on federal legislation was read and accepted. It was resolved that the committee should be requested to make an effort to obtain an extension of time to June 15th for the filing of income tax returns.

The report of the committee on publication was read and accepted.

A communication from the Ronald Press Company dealing with certain matters discussed in the report was referred to the committee on publication for further report.

The report of the committee on state legislation was read and accepted.

The report of the special committee on ethical publicity was read and accepted.

The chairman of the special committee on procedure presented an oral report which was accepted.

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The chairman of the war committee briefly reviewed the work of members of the committee, and it was resolved that the committee should be requested to prepare a complete report for presentation at the annual meeting in September, 1919.

The secretary of the board of examiners reported that the board would like the council to interpret the constitution so as to include military service during the time of emergency as not breaking the continuity of public practice. A motion to this effect was unanimously adopted.

The vacancy in the board of examiners caused by the death of Bertram D. Kribben was filled by the election of Ernest Reckitt of Chicago for the unexpired term.

There was discussion of the expense of conducting examinations on behalf of the state boards of accountancy, and the secretary of the board of examiners explained the arrangement which had been made with state boards to contribute part of their fees to cover the expenses incident to the joint conduct of examinations.

The work of the library and bureau of information was the subject of discussion. In view of the fact that some of the subscriptions to the endowment fund were being paid in instalments, and that the interest on investments was therefore somewhat below the requirements for the current fiscal year, it was resolved that each member and associate should be asked to contribute \$5.00 to the current expenses under the endowment fund for this year.

Resolutions in regard to the deaths of members were adopted and ordered transmitted to the families of the deceased members.

After discussion of various methods for encouraging suitable applicants to seek membership in the Institute, it was resolved that a special committee on membership should be appointed with power to add to its number at discretion.

Certain rules of conduct suggested by the committee on professional ethics were discussed.

The following rule was adopted:

"No member shall, with view to employing him, approach or cause to be approached an employee of a fellow member without first informing said fellow member of his intent. This rule shall not be construed so as to inhibit negotiations with anyone who of his own initiative or in response to public advertisement shall apply to a member for employment."

A second rule proposed by the committee was discussed and action deferred until the annual meeting.

Certain recommendations in the report of the committee on state legislation were considered. Upon recommendation of the committee action was deferred as to the Alabama law. The Arizona law was approved. The amended law of Montana was approved.

Certain recommendations of the committee on ethical publicity requesting members to abstain from advertising were ordered published in the *Bulletin*.

American Institute of Accountants

After consideration of an invitation from the Chamber of Commerce of the United States of America to name two members to serve as members of a cost accounting committee of the chamber, the invitation was accepted and the chair authorized to nominate such members.

It was resolved that a special committee of three members be appointed to consider the question of forming subsidiary societies or chapters in the various states in which there are practising accountants, to report at the next meeting of the council with suggestions as to the practicability of such a plan; and it was further resolved that if recommendations involving changes in the constitution and by-laws were made by the special committee they should be submitted to the committee on constitution and by-laws.

The meeting adjourned.

Income Tax Department

EDITED BY JOHN B. NIVEN, C.P.A.

Herewith are published treasury decisions 2810-2, inclusive, and 2815-6, inclusive; also a welcome extension of the filing date to June 15th for all corporations (but only corporations) which filed tentative returns (1031-T) on or before March 15th. Observe particularly that this extension does not apply to individuals or to corporations whose fiscal years end later than December 31, 1918. To those classes of taxpayers extensions will be granted only on request.

Returns of non-resident aliens are dealt with in T. D. 2811 and 2815. The first gives a partial list of those countries, so far as known to the treasury department, whose citizens may claim the specific personal exemption of income earned by them from American sources, under section 216 (e), because of reciprocal privileges granted by their countries to American citizens. T. D. 2815 deals with the adaptation of the forms for resident individuals to use for non-resident aliens. It should not be overlooked that the latter are not entitled to the 6% rate on the first \$4,000.00 of income bearing the tax, but must pay the 12% rate on the entire income.

In T. D. 2816 is contained a decision of the supreme court that reverses a decision of the circuit court of appeals embodied in T. D. 2720 (see *THE JOURNAL OF ACCOUNTANCY*, July, 1918, pp. 43-4, 48-55). The decision arose under the 1913 act, but would apply to the present law as well. It decrees that trusts vested with power of discretion, usually possessed by a board of directors, over the distribution of trust income in their control are not to be regarded as "associations," but as fiduciaries, because the power of the trustees to defer payment or divert the income to improvement of the capital is not enough to convert the trust into a joint-stock company. Consequently the beneficiaries and not the trust must pay the tax.

TREASURY RULINGS

(T. D. 2810, March 21, 1919)

Income tax.

Extension of time in which taxpayers living or temporarily residing in the territory of Alaska may, pursuant to the requirements of the revenue act of 1918, file returns of income for the year 1918 with the collector of internal revenue for their respective districts.

Because of the fact that it will be impossible to put into the hands of taxpayers residing or located in the territory of Alaska the blank forms and instructions prescribed by this department for the use of taxpayers in making returns pursuant to the new revenue act in time for such returns to be filed on or before the due date (March 15, 1919) an extension of time to June 15, 1919, is hereby granted to all taxpayers living or residing temporarily in the territory of Alaska. This extension shall not be construed as extending the payment of the second instalment due June 15, 1919, and subsequent instalments, therefore two instalments will be due June 15, 1919.

Income Tax Department

(T. D. 2811, March 22, 1919)

The preliminary edition of regulations 45, amended (1) by the addition of a new article numbered 307, concerning the allowance of credit for a personal exemption and for dependents to a nonresident alien individual, and (2) by the addition of a new article numbered 316, concerning the allowance of credits to a non-resident alien employee.

The preliminary edition of regulations 45 is hereby amended by the addition of two new articles, numbered 307 and 316, respectively, and reading as follows:

ART. 307. Credit for a personal exemption and for dependents in case of nonresident alien individual.—(a) The following is an incomplete list of countries which either impose no income tax or in imposing an income tax allow the similar credit required by the statute: Argentina, Brazil, Canada, Cuba, France, Italy, Mexico, Union of South Africa.

(b) The following is an incomplete list of countries which in imposing an income tax do not allow the similar credit, required by the statute: Australia, Great Britain and Ireland, Japan, New Zealand.

A nonresident alien individual who is a citizen or subject of any country on the first list is entitled for the purpose of the normal tax to such credit for a personal exemption and for dependents as his family status may warrant. (See arts. 302-305.) If he is a citizen or subject of any country on the second list he is not entitled to any such credit. If he is a citizen or subject of a country which is on neither list, then, to secure credit for a personal exemption or for dependents, or both, he must prove to the satisfaction of the commissioner that his country does not impose an income tax on that, in imposing an income tax, it grants the similar credit required by the statute. (See art. 306.)

ART. 316. Allowance of credit to nonresident alien employee.—A nonresident alien employee, provided he is entitled under section 216 of the statute to credit for a personal exemption or for dependents, or both (see arts. 301-307, particularly the lists of countries in art. 307), may claim the benefit of such credit by filing with his employer form 1115 duly filled out and executed under oath. On the filing of such a claim the employer shall examine it. If, on such examination, it appears that the claim is in due form, that it contains no statement which, to the knowledge of the employer, is untrue, and that such employee, on the face of the claim, is entitled to credit, and that such credit has not yet been exhausted, such employer need not, until such credit be in fact exhausted, withhold any tax from payment of salary or wages made to such employee. Every employer with whom affidavits of claim on form 1115 are filed by employees shall preserve such affidavits until the following calendar year, and shall then file them, attached to his annual withholding return (see art. 367) on form 1042, revised, with the collector on or before March 1. In case, however, when the following calendar year arrives, such employer has no withholding to return, he shall forward all such affidavits of claim, so filed with him by employees, directly to the commissioner (sorting division), with a letter of transmittal, on or before March 1. In all other cases benefit of the credits allowed against net income for the purpose of the normal tax may not be received by a nonresident alien by filing a claim with the withholding agent, but only by claiming them upon filing a return of income as prescribed in article 403.

(T. D. 2812, March 22, 1919)

Correction in form 1120, corporation income-profits tax return form.

Attention is directed to an error in the title of schedule K, form 1120, "Corporation income-profits tax return." The title of this schedule reads "Changes in invested capital from end of pre-war period to beginning of

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taxable year not shown in schedule E." It should read "Changes in invested capital from end of pre-war period to beginning of taxable year not shown in schedule D."

(T. D. 2815, April 2, 1919)

Returns of income by or for nonresident alien individuals.

Nonresident alien individuals or their authorized agents should use form 1040, revised, or form 1040A, revised, in making returns of income derived from sources within the United States, regardless of amount, unless the tax on such income has been fully paid at the source. If a nonresident alien individual is not liable for any tax which has been withheld at the source, no refund of such tax will be permitted unless such a return is filed and a statement is attached thereto indicating the amounts of tax withheld and the names and post-office addresses of all withholding agents. Unless a nonresident alien individual shall render a return of income, the tax will be collected on the basis of his gross income (not his net income) from sources within the United States.

In filling out form 1040, revised, or form 1040A, revised, the income reported in each case should be the income from sources within the United States, as defined in article 91 of regulations 45, and the deductions taken should be those allowed under article 271 of the regulations. In items 28 and 33 of form 1040, revised, and in items O and P of form 1040A, revised, *the tax must be computed at 12 per cent instead of 6 per cent*. No credit may be taken for item 40 in form 1040, revised.

A nonresident alien individual, similarly to a citizen or resident, is entitled for the purpose of the normal tax to credit dividends from domestic or resident foreign corporations, interest on obligations of the United States, a personal exemption, and \$200 for each dependent, except that if he is a citizen or subject of a country which imposes an income tax a personal exemption or credit for dependents is allowed him "only if such country allows a similar credit to citizens of the United States not residing in such country." "If such country allows a similar credit" means if such country in imposing its income tax allows a personal exemption or a credit for dependents, as the case may be, and allows it without discrimination to citizens of the United States not residing in such country. To satisfy the requirement of a similar credit it is not necessary that the personal exemption or credit for dependents, as the case may be, should be the same as that allowed by the United States statute. For countries that allow and do not allow similar credits see T. D. 2811 of March 22, 1919.

See generally title II of the revenue act of 1918 and regulations 45, and particularly articles 2, 91, 92, 271, 305, 311-315, 361-372, 403, 443, 1121, 1131, and 1132.

(T. D. 2816 April 2, 1919)

Income tax—Decision of the Supreme Court.

1. JOINT-STOCK ASSOCIATION.

Where trustees hold shares of stock of a corporation and real estate subject to a lease, collecting the dividends and rents, but otherwise doing no business, and distribute the income less taxes and similar expenses to the holders of their receipt certificates, who have no control except the right of filling a vacancy among the trustees and of consenting to a modification of the terms of the trust, upon these special facts under the act of October 3, 1913, the trust is *not subject to the income tax as a joint-stock association*, and the trustees and the cestui que trust are to be treated as *fiduciaries and beneficiaries for purposes of taxation*.

2. JUDGMENT REVERSED.

The judgment of the circuit court of appeals is reversed and the judgment of the district court is affirmed. (See T. D. 2720 of June 4, 1918.)

Income Tax Department

The appended decision of the United States supreme court in the case of *Alvah Crocker et al., trustees, v. John F. Malley, collector of internal revenue*, is published for the information of internal-revenue officers and others concerned.

SUPREME COURT OF THE UNITED STATES. No. 649. OCTOBER TERM, 1918.

Alvah Crocker, et al., trustees, petitioners, v. John F. Malley, collector of internal revenue.

ON writ of certiorari to the United States circuit court of appeals for the first circuit.

[March 17, 1919.]

Mr. Justice HOLMES delivered the opinion of the court:

This is an action to recover taxes paid under protest to the collector of internal revenue by the petitioners, the plaintiffs. The taxes were assessed to the plaintiffs as a joint-stock association within the meaning of the income-tax act of October 3, 1913 (c. 16, sec. 2, G. (a), 38 Stat. 114, 166, 172), and were levied in respect of dividends received from a corporation that itself was taxable upon its net income. The plaintiffs say that they were not an association but simply trustees, and subject only to the duties imposed upon fiduciaries by section 2, D. The circuit court of appeals decided that the plaintiffs, together, it would seem, with those for whose benefit they held the property, were an association, and ordered judgment for the defendant, reversing the judgment of the district court. (250 Fed., 817.)

The facts are these: A Maine paper manufacturing corporation with eight shareholders had its mills on the Nashua River, in Massachusetts, and owned outlying land to protect the river from pollution. In 1912 a corporation was formed in Massachusetts. The Maine corporation conveyed to it seven mills and let to it an eighth that was in process of construction, together with the outlying lands and tenements, on a long lease, receiving the stock of the Massachusetts corporation in return. The Maine corporation then transferred to the plaintiffs as trustees the fee of the property, subject to lease, left the Massachusetts stock in their hands, and was dissolved. By the declaration of trust the plaintiffs declared that they held the real estate and all other property at any time received by them thereunder, subject to the provisions thereof, "for the benefit of the cestui que trusts (who shall be trust beneficiaries only, without partnership, associate, or other relation whatever inter sese)" upon trust to convert the same into money and distribute the net proceeds to the persons then holding the trustees' receipt certificates—the time of distribution being left to the discretion of the trustees, but not to be postponed beyond the end of 20 years after the death of specified persons then living. In the meantime the trustees were to have the powers of owners. They were to distribute what they determined to be fairly distributable net income according to the interests of the cestui que trusts but could apply any funds in their hands for the repair or development of the property held by them, or the acquisition of other property, pending conversion and distribution. The trust was explained to be because of the determination of the Maine corporation to dissolve without waiting for the final cash sale of its real estate, and was declared to be for the benefit of the eight shareholders of the Maine company who were to receive certificates subject to transfer and subdivision. Then followed a more detailed statement of the power of the trustees and provision for their compensation, not exceeding 1 per cent. of the gross income unless with the written consent of a majority in interest of the cestui que trusts. A similar consent was required for the filling of a vacancy among the trustees and for a modification of the terms of the trust. In no other matter had the beneficiaries any control. The title of the trust was fixed for convenience as the Massachusetts Realty Trust.

The declaration of trust on its face is an ordinary real estate trust of the kind familiar in Massachusetts, unless in the particular that the trustees' receipt provides that the holder has no interest in any specific property and that it purports only to declare the holder entitled to a certain fraction of the net proceeds of the property when converted into cash "and meantime to income." The only property expressly mentioned is the real estate not transferred to the Massachusetts corporation. Although the trustees in fact have held the stock of that corporation and have collected dividends upon it, their doing so is not contemplated in terms by the instrument. It does not appear very clearly that the eight Maine shareholders might not have demanded it had they been so minded. The function of the trustees is not to manage the mills but simply to collect the rents and income of such property as may be in their hands, with a large discretion in the application of it, but with a recognition that the receipt holders are entitled to it subject to the exercise of the powers confided to the trustees. In fact, the whole income, less taxes and similar expenses, has been paid over in due proportion to the holders of the receipts.

There can be little doubt that in Massachusetts this arrangement would be held to create a trust and nothing more. "The certificate holders * * * are in no way associated together nor is there any provision in the [instrument] for any meeting to be held by them. The only act which (under the [declaration of] trust) they can do is to consent to an alteration * * * of the trust" and to the other matters that we have mentioned. They are confined to giving or withholding assent, and the giving or withholding it "is not to be had in a meeting but is to be given by them individually." "The sole right of the cestuis que trust is to have the property administered in their interest by the trustees, who are the masters, to receive income while the trust lasts, and their share of the corpus when the trust comes to an end." *Williams v. Milton* (215 Mass., 1, 10, 11; lb., 8). The question is whether a different view is required by the terms of the present act. As by D, above referred to, trustees and association acting in a fiduciary capacity have the exemption that individual stockholders have from taxation upon dividends of a corporation that itself pays an income tax, and as the plaintiffs undeniably are trustees, if they are to be subjected to a double liability the language of the statute must make the intention clear. *Gould v. Gould* (245 U. S., 151, 153); *United States v. Isham* (17 Wall., 496, 504).

The requirement of G (a) is that the normal tax thereinbefore imposed upon individuals shall be paid upon the entire net income accruing from all sources during the preceding year "to every corporation, joint-stock company or association, and every insurance company, organized in the United States, no matter how created or organized, not including partnerships." The trust that has been described would not fall under any familiar conception of a joint-stock association, whether formed under a statute or not. *Smith v. Anderson* (15 Ch. D., 247, 273, 274, 277, 282). *Eliot v. Freeman* (220 U. S., 178, 186). If we assume that the words "no matter how created or organized" apply to "association" and not only to "insurance company," still it would be a wide departure from normal usage to call the beneficiaries here a joint-stock association when they are admitted not to be partners in any sense, and when they have no joint action or interest and no control over the fund. On the other hand the trustees by themselves can not be a joint-stock association within the meaning of the act unless all trustees with discretionary powers are such, and the special provision for trustees in D is to be made meaningless. We perceive no ground for grouping the two—beneficiaries and trustees—together, in order to turn them into an association, by uniting their contrasted functions and powers, although they are in no proper sense associated. It seems to be an unnatural perversion of a well-known institution of the law.

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We do not see either that the result is affected by any technical analysis of the individual receipt holder's rights in the income received by the trustees. The description most in accord with what has been the practice would be that, as the receipts declare, the holders, until distribution of the capital, were entitled to the income of the fund subject to an unexercised power in the trustees in their reasonable discretion to divert it to the improvement of the capital. But even if it were said that the receipt holders were not entitled to the income as such until they got it, we do not discern how that would turn them into a joint-stock company. Moreover the receipt holders did get it, and the question is what portion it was the duty of the trustees to withhold.

We presume that the taxation of corporations and joint-stock companies upon dividends of corporations that themselves pay the income tax was for the purpose of discouraging combinations of the kind now in disfavor, by which a corporation holds controlling interests in other corporations which in their turn may control others, and so on, and in this way concentrates a power that is disapproved. There is nothing of that sort here. Upon the whole case we are of opinion that the statute fails to show a clear intent to subject the dividends of the Massachusetts corporation's stock to the extra tax imposed by G (a).

Our view upon the main question opens a second one upon which the circuit court of appeals did not have to pass. The district court, while it found for the plaintiffs, ruled that the defendant was entitled to retain out of the sum received by him the amount of the tax that they should have paid as trustees. To this the plaintiffs took a cross writ of error to the circuit court of appeals. There can be no question that although the plaintiffs escape the larger liability, there was probable cause for the defendant's act. The commissioner of internal revenue rejected the plaintiff's claim, and the statute does not leave the matter clear. The recovery therefore will be from the United States. (Rev. Stats., sec. 989.) The plaintiffs, as they themselves alleged in their claim, were the persons taxed, whether they were called an association or trustees. They were taxed too much. If the United States retains from the amount received by it the amount that it should have received, it can not recover that sum in a subsequent suit.

Judgment of the circuit court of appeals reversed; judgment of the district court affirmed.

Extension of time for completing corporate returns and for filing certain returns not the basis for assessment of tax.

TO COLLECTORS OF INTERNAL REVENUE:

In view of the short time between the date on which forms were available and the due date (March 15), of calendar year returns required under the revenue act of 1918, notice was given through the public press and otherwise that tentative returns (forms 1031-T and 1040-T), accompanied by a first instalment of one-fourth of the estimated tax due would be accepted on that date, and that in such cases forty-five days would be given in which to file complete returns, but that interest at the rate of one-half of 1% per month upon the amounts by which such instalment payments fall short of the correct amounts would be collected.

In the case of corporations which filed form 1031-T on or before March 15, a further extension, where needed, to June 15, 1919, in which to file complete returns on form 1120 is hereby granted, but all such corporations will be required to pay on or before June 15 a sum sufficient, with the amount paid on March 15, to equal one-half the tax due as shown by the return on form 1120, together with interest at the rate of one-half of 1% per month on any deficiency in the first instalment.

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It is not deemed necessary to grant an extension of time beyond the forty-five days originally granted for the completion of personal returns, except on special request therefor for sufficient reasons given, but the above ruling as to interest on deficient instalment applies to them.

An extension of time in which to file returns of corporations making returns for a fiscal year ended either on January 31 or February 28, 1919, will on request be granted to June 15, 1919, but such extension shall not operate to extend the due date of any instalment of tax after the first. Interest at the rate of one-half of 1% per month will be collected from the time the first instalment would have been payable if the extension had not been requested.

The time for filing returns of information (forms 1096 and 1099), fiduciary returns (form 1041), withholding returns (form 1042, accompanied by form 1098 and form 1013), returns of partnerships and personal service corporations required to file returns on a calendar year basis, and all other returns required under the income tax and profits tax provisions of the law, which are not the basis for the assessment of the tax, is also extended to June 15, 1919.

DANIEL C. ROPER,
Commissioner.

Washington, D. C., April 14, 1919.

Students' Department

EDITED BY SEYMOUR WALTON, C.P.A.

(ASSISTED BY H. A. FINNEY, C.P.A.)

GOODWILL—OR SPECULATION

The principle has been generally accepted that the payment of more than book value for an established business constitutes a purchase of the goodwill inherent in the business as the result of various conditions peculiar to the particular enterprise which is purchased. It is questionable whether a close analysis will justify a universal application of this principle.

It cannot be applied to all cases in which more than book value is paid, because such a payment may be made before a business has become established. Goodwill is based on the ability of an enterprise to make a greater regular profit than the normal amount demanded by an investor. It must, perforce, be a matter of growth, since no enterprise can be said to be able to make a certain rate of profit until it has been established long enough to demonstrate its earning capacity. If a share in the business is purchased at more than book value before the earning capacity is established, the extra payment cannot be said to be made for the goodwill. It is made in the hope that the future will prove that the enterprise will be successful and that its value will therefore be increased beyond what the normal course of such a business would lead one to expect. But when one buys an interest in a business, whether stock on the stock exchange or a share in a partnership, with the expectation of making a profit by its rise in value, he is to that extent indulging in speculation.

An example will illustrate the difference between goodwill and speculation, and will show how the two may be mixed in one transaction.

A and B, finding conditions favorable for a certain enterprise, form a partnership for the purpose of carrying it on. Having made all their arrangements, including the premises, state rights or whatever else made the conditions seem favorable, they begin operations, but have not progressed far enough to demonstrate that they will have even a moderate success, when C has his interest aroused. After making an investigation of the prospects of the enterprise, C offers to join them and to put in capital equal to each of theirs for a third interest. A and B agree to let him in, but demand a 10 per cent bonus to be divided between the two of them. If C agrees to this, he pays the 10 per cent as a speculation, not as goodwill.

After the business has been conducted long enough to establish the fact that the earning power is above the normal and that the business is sure to continue prosperous with good management, D expresses a desire to buy a fourth interest. If the normal profit is fixed at 10 per cent and the enterprise is making 18 per cent, A, B and C will require

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that D shall not only pay enough to cover the book value of a fourth interest, but also allow A, B and C to capitalize the extra earnings of 8 per cent on some agreed basis by credits to their accounts, necessitating a further contribution by D of enough to make his capital one-fourth of the new capitalization. D has then paid an amount above the book value of his share of the business to buy a share of the goodwill.

However, it may be that A, B and C will claim that the trend of the business has been steadily upward, and that there is every indication that it will continue to improve. Therefore they will not let D in on the basis of the extra 8 per cent but require that he shall pay on the basis of 12 per cent. If D agrees to this, it seems that he is paying for two different things: a goodwill based on a proved earning capacity and a speculation based on his hope that the future will produce better value for him than now exists.

This distinction is important only in case the allowance made to the old partners appears on the books. If it is a cash consideration paid to each of the old partners it does not make any difference what it is called. The condition then would be similar to what it would be if A, B and C had been the sole stockholders in a corporation and each had agreed to sell one quarter of his stock to D at more than book value. The extra payment would be a personal matter between the parties and would not show on the corporation's books.

If the whole allowance appears on the books by a charge to goodwill and credits to A, B and C, it is manifest that the goodwill account is overvalued. In the interests of accurate accounting it would be better to charge goodwill with that amount only which could reasonably be said to be due to the present earning capacity, basing D's contribution to the capital on the condition at that point, and then for D to pay the additional allowance to A, B and C in cash. If it is necessary that the whole allowance appears on the books, it should be divided in proper proportion between goodwill and an account called perhaps "bonus to old partners." It would naturally be desirable to charge off the latter account as soon as practicable.

In corporations this question comes up only in case of mergers or in preparing a consolidated balance-sheet for a holding company and its subsidiaries. In many of these cases the amounts paid for the stock of the constituent or subsidiary companies is very much greater than the present earnings would justify. In many instances the principal object is to eliminate dangerous competition, but a payment made with that object in view ought not to be classed as a purchase of goodwill.

The celebrated Safety Razor Company problem, already referred to several times in this department, is a case in point. That company bought all the stock of the L. W. Company and of the Steel Blade Company, paying therefor \$2,500,000. It is not stated how this payment was divided between the two companies. Each of the companies already had an asset of goodwill on its books.

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The condition therefore was as follows:

Payment by Safety Razor Co.			2,500,000.00
Property acquired by this purchase:			
Net assets L. W. Co.	1,035,000.00		
Less goodwill	250,000.00	785,000.00	
Net assets Steel Blade Co.	535,000.00		
Less goodwill	50,000.00	485,000.00	
Net tangible assets acquired		1,270,000.00	
Less Steel Blade stock owned by L. W. Co. and carried at		300,000.00	970,000.00
Total excess paid over net working assets			1,530,000.00

In all the answers to the problem this amount is carried as goodwill in the consolidated balance-sheet.

An analysis of the conditions of the two companies at the time of their purchase by the Safety Razor Company furnishes these data:

The L. W. Company had a capital of \$400,000 and a surplus of \$635,000. Its earnings for the three months prior to the purchase were at the rate of \$120,000 per annum.

The Steel Blade Company's capital was \$600,000, but it had a deficit of \$65,000, and its losses for the three months prior to the purchase were at the rate of \$60,000 per annum.

It is plain that the Steel Blade Company on this showing could not be said to have any goodwill. All the goodwill paid for must therefore be due to the earning power of the L. W. Company. The actual capital invested in this company, consisting of its capital stock and surplus at the time of purchase, less the goodwill already carried, was \$785,000, on which the earnings are at the rate of \$120,000 per annum, or a little more than 15 per cent. Allowing the very low rate of 8 per cent. as the normal rate to be expected from such an enterprise, it would require \$62,800 of the income to cover the return from invested capital. This would leave \$57,200 to represent the earnings from goodwill. Capitalized at 8 per cent. this would justify a goodwill of \$715,000. If the whole \$1,530,000 which was paid above book value is charged to goodwill, it is evident that there is an overcharge of \$815,000.

The overpayment may be made to gain control of the two companies in the hope that unified action may result in cheaper production or it may be for the purpose of getting rid of disastrous competition. In either case it is speculating on what may be hoped for in the future, and it is not based entirely on the experience of the past.

The question that arises is whether it is true that a goodwill of \$1,530,000 has been established by the purchase, or whether a more accurate treatment would not be to charge goodwill with only \$715,000 and to charge premium on subsidiary stocks with \$815,000. The figures would

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vary, if a rate different from 8 per cent. were used. The premium account would naturally be absorbed if the net worth of the subsidiary companies were allowed to increase by refraining from using all the profits made by them as dividends or as credits to surplus in a consolidated balance-sheet. A portion of the profit should be devoted each year to writing off the premium account.

Edward S. Rogers says of goodwill: "As with all intangible things, goodwill is hard to place mentally. Like reputation, popularity and friendliness, it is so elusive that there is little wonder its value and its very existence are so frequently ignored. Like character and reputation in an individual—the things which enable anyone to associate with his fellows—goodwill is what perpetuates a business. It is that which makes tomorrow's business more than an accident. It is the reasonable expectation of future patronage based on past satisfactory dealings. Promiscuous and casual customers or clients do not pay the profits. Those who come regularly do. These persons have found the dealer trustworthy, his goods of high quality, his skill and knowledge commendable. They have been satisfied with the treatment they have received in the past and are reluctant in the absence of some reliable recommendation or special circumstance to risk transferring their custom to another. It is this hope and probability that keeps a business going and gives it a selling value above that of its leasehold, equipment and stock."

RELATION OF TRADE-MARKS TO GOODWILL

It is often said of a business that, in addition to its goodwill, it possesses certain trade-marks or trade-names which are very valuable. The making of such a statement indicates a wrong conception of the nature of a trade-mark. In itself there is no value attached to a certain picture, such as that of two dusky children, or to a made-up name, such as Uneeda. They are of use only as identifying Gold Dust washing powder or a special kind of biscuit. If the things which they identify had not proved themselves through years of use to be articles of good quality, made by concerns which can be depended upon to keep them up to a high standard, the peculiar picture or name would have no value whatever.

If some one other than the owners of the trade-marks should use them on similar articles, it would be equivalent to saying: "This is the washing powder which you have been in the habit of using and is the one whose excellent qualities have established a goodwill in the minds of those using such an article." It is plain that the wrongful user of the trade-mark is attempting to divert to his own benefit the goodwill built up by the original manufacturer and that is the goodwill which is valuable and not the identifying trade-mark.

That the trade-mark or trade-name has no value in itself is shown by the fact that if a manufacturer allows his goods to fall below the high standard which has hitherto attracted customers, no device, however attractive, will sell the goods. The customer can no longer depend on the

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quality of the goods and after a few disappointments will cease to buy them. The trade-mark is exactly the same as it was before, but it has now become a symbol of illwill instead of goodwill.

Usually the trade-mark or trade-name is much more important than the name of the manufacturer. Thousands of persons are using Gold Dust washing powder who have not the faintest idea of the name of the manufacturer. If a hundred housewives were asked to give the names of the concerns which make Sapolio, Fairy soap, Royal baking powder, Old Dutch cleanser and many other articles that are identified by a picture or a name, it is certain very few could do so. They have become accustomed to seeing the picture of the typical Hollander chasing dirt, and will take any package that bears it or anything closely resembling it. They may not even remember the name of the article, but will ask for the woman with a broom, or will point it out on the shelf. It is owing to this that the courts have uniformly enjoined the use by competitors of any device that is calculated to deceive ordinary persons who are not critical observers. Sometimes the article is known by the name of the manufacturer, who has not adopted a trade-name, though he may use a trade-mark. An instance of this is Baker's chocolate, which has the well-known picture of the woman with a tray on every package. The picture is not in any way connected with the name of the article, which is always known simply as Baker's chocolate. In spite of the right of a man to use his own name, the courts enjoined W. H. Baker from selling a chocolate put up in a wrapper somewhat similar to that used by the Walter Baker Company, but without the picture, and with the name distinctly stated as W. H. Baker & Company. While the chocolate was correctly stated to be Baker's chocolate, it was not the particular article whose goodwill had been established by many years in which a uniform high standard of excellence had been maintained. It was not until he was forced to put on every package of his output in prominent letters "W. H. Baker is distinct from the old chocolate manufactory of Walter Baker & Company" that he was allowed to use even his own name.

In preventing the infringement or imitation of a trade-mark or trade-name, the courts have uniformly done so on the ground that it was the goodwill that was valuable, and that the mark or name was merely the expression of the goodwill. The sign on the door of a big and successful business is intrinsically worth very little. As representative of the great concern whose name it bears, it is immensely valuable. On this point Edward S. Rogers says:

"Goodwill must be focused upon something—it must be more than a general uncrystallized feeling of friendliness. There must be something to which it can attach to be of value to any one. To patronize a store or hotel a second time it must be identified. Whatever it is that fixes identity and thus makes certain to the potential patron that his friendliness or goodwill towards it is not being diverted from the intended re-

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cipient to another is the embodiment of the store or hotel proprietor's expectation of the public's continued patronage and the benefits resulting to him from it. The means of identification of business establishments are the things to which goodwill attaches and which make a continuing asset. It may be the name of the proprietor, the sign over the door, a device on the wrapping paper, a peculiarly designed store front, a partnership style, a corporate name or a nickname. It is of no consequence what it may be in any particular case; if it is a means of identification it may not be used or imitated by competitors so as to impair the value to the true owner of the goodwill and patronage which its use secures to him."

PATENTS

It is often very difficult to reach a basis for the valuation of patents when they are among the assets transferred from one concern to another. It will simplify matters somewhat if the value of the patents can be separated from that of the goodwill which the business has been able to establish in consequence of the monopoly conferred by the patents. Having the exclusive right to manufacture a certain article for a number of years, it has the opportunity to make that article a confirmed habit among all its consumers. When the patent expires and other concerns acquire the right to make an exactly similar article, they find it up-hill work to compete with the original manufacturer. The consumers are satisfied and do not care to try experiments.

If a concern that has for seven years been building up a reputation for an article protected by patent should then sell to another concern, the basis of the valuation of the patent would undoubtedly be something more than the excess profits of the next ten years. However, the price agreed upon should not be considered the value of the patent, nor should it be charged to "patents" to be written off in ten years. By far the larger portion of the price should be considered the value of the goodwill, if the protected article has proved a success. The distinction may be important, because patents must be written off during their life, but goodwill may be considered a permanent asset.

SINKING FUND OR SERIAL BOND PLAN

Editor, Students' Department:

SIR: In a recent publication a writer states with reference to the cancellation of pre-purchase of bonds for which a sinking fund has been created: "Whether the bonds are held in the sinking fund or whether they are retired would have no effect upon the accounts in subsequent years. The interest on the bonds, if the bonds were not retired, would be charged to an interest on bond account, but would be credited to a trustee's income account and the credit in the trustee's income account would offset the debit in the interest on bonds account. If the bonds were retired, there would, of course, be no interest charge or interest credit."

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I have also read in another authority that bonds so purchased should not be cancelled. . . . "Otherwise the fund would be deficient at its maturity. . . ."

Can the above statements be reconciled? And how would the sinking fund be deficient at maturity if part of the cash had been applied to redemption of the bonds for which it was established? J. W. T.

New York.

The statement made in the article quoted cannot be reconciled with the other statement for the reason that the article is wrong in this particular. The first error is in failing to distinguish between a sinking fund and a redemption fund. To be a true sinking fund, it is imperative that any of the company's own securities purchased for the fund shall be held alive in the fund so that the interest thereon will compound to maturity. If the securities are cancelled when purchased the fund can no longer be truly called a sinking fund, but should be called a redemption fund.

The reason for insisting upon this distinction is that sinking fund contributions are computed by finding what equal periodical instalments at compound interest will produce a fund sufficient to retire all the bonds at maturity. Where some of the securities are cancelled instead of held alive in the fund, the fund loses the compound interest on the retired securities. For this reason you cannot inaugurate a programme for bond retirement on the sinking fund basis and then disorganize that programme by shifting to the periodical redemption plan.

To make this matter as clear as possible let us assume that a company issues \$100,000 of 5 per cent. bonds, interest payable annually, maturing in five years. It is provided in the trust deed that a sinking fund shall be established by contributions of equal amount to be paid to the trustee of the sinking fund in cash at the end of each year. The amount of the annual contribution will depend upon the rate of interest which can be earned on the periodical instalment. Assuming that 5 per cent. can be earned, we find in an interest table that an annual contribution of \$1.00, made at the end of each year, will amount to \$5.525631. Dividing \$100,000 by 5.525631 produces a quotient of \$18,097.48, which is the annual contribution necessary to make on a 5 per cent. compound interest basis in order to produce a fund of \$100,000 at the end of five years. The following table shows the accumulation of the fund on the assumption that each year the company buys \$15,000 of its own bonds and holds them in the sinking fund:

TABLE OF ACCUMULATION OF SINKING FUND

Assuming that the annual instalment of \$18,097.48 and interest accretions are invested as follows:

Company's own 5 per cent. bonds of \$15,000, held alive in fund.
Other 5 per cent. securities of other companies.

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End of year	Annual cash deposit	Interest earned	Securities purchased	Total fund
1	\$18,097.48	0	\$18,097.48	\$18,097.48
2	18,097.48	\$904.87	19,002.35	37,099.83
3	18,097.48	1,854.99	19,952.47	57,052.30
4	18,097.48	2,852.62	20,950.10	78,002.40
5	18,097.48	3,900.12	21,997.60	100,000.00
	<u>\$90,487.40</u>	<u>9,512.60</u>		

The sinking fund would contain $5 \times \$15,000$, or \$75,000 of the company's own bonds, and \$25,000 of cash or securities with which to purchase the remaining bonds.

To show that the fund will be deficient if the securities issued by the company itself are cancelled when purchased for the sinking fund, the following table of contributions, interest earnings and bond retirements is presented:

TABLE OF ACCUMULATION OF FUND

Assuming that \$15,000 of company's own bonds are purchased each year and cancelled—remainder of annual contributions plus interest accretions being invested in 5 per cent. securities of other companies.

End of year	Cash	Interest earned	Total	Company bonds retired	Increase in fund	Balance of fund
1	\$18,097.48	0	\$18,097.48	\$15,000.00	\$3,097.48	\$3,097.48
2	18,097.48	154.87	18,252.35	15,000.00	3,252.35	6,349.83
3	18,097.48	317.49	18,414.97	15,000.00	3,414.97	9,764.80
4	18,097.48	488.24	18,585.72	15,000.00	3,585.72	13,350.52
5	18,097.48	667.53	18,765.01	15,000.00	3,765.01	17,115.53
	<u>\$90,487.40</u>	<u>\$1,628.13</u>				

There are outstanding bonds to be redeemed amounting to	\$25,000.00
while the sinking fund is only	17,115.53

Hence the fund is deficient	<u>7,884.47</u>
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This is the difference between	
The interest earnings of the first fund totaling	\$9,512.60
and interest earnings of the second fund totaling	1,628.13
	<u>\$7,884.47</u>

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The company saves the expense of the annual simple interest at 5 per cent. on the bonds redeemed, but it loses the compound interest on the bonds redeemed. The following table shows the interest shortages:

Year	Interest when bonds are held alive	Interest when bonds are redeemed	Interest lost
1	0.00	0.00	0.00
2	904.87	154.87	750.00
3	1,854.99	317.49	1,537.50
4	2,852.62	488.24	2,364.38
5	3,900.12	667.53	3,232.59
	<hr/> 9,512.60	<hr/> 1,628.13	<hr/> 7,884.47

These shortages are accounted for as follows:

During the second year the fund is short	15,000.00
Hence the company loses 5 per cent. interest on \$15,000.00 or	750.00
	<hr/>
Increasing the shortage in the fund to	15,750.00
Cancelling the next purchase of bonds	15,000.00
	<hr/>
Makes a shortage during the third year of	30,750.00
Hence the company loses 5% interest on \$30,750.00, or	1,537.50
	<hr/>
Increasing the shortage in the fund to	32,287.50
Cancelling the next purchase of bonds	15,000.00
	<hr/>
Makes a shortage during the fourth year of	47,287.50
Hence the company loses 5% interest on \$47,287.50, or	2,364.38
	<hr/>
Increasing the shortage in the fund to	49,651.88
Cancelling the next purchase of bonds	15,000.00
	<hr/>
Makes a shortage during the fifth year of	64,651.88
Hence the company loses 5% interest on \$64,651.88, or	3,232.59
	<hr/>
Making a total shortage of	67,884.47
	<hr/>
Bonds still outstanding total	40,000.00
	<hr/>
If the fund should be	100,000.00
and is short	67,884.47
	<hr/>
there must be in the fund	32,115.53
	<hr/>
Shortage	7,884.47
	<hr/>

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The statement "whether the bonds are held in the sinking fund or whether they are retired would have no effect upon the accounts in subsequent years," is clearly incorrect. It is true that "the interest on the bonds, if the bonds were not retired, would be charged to an interest on bond account, but would be credited to a trustee's income account," but it is also true that the trustee's income account would also be credited with interest on interest. The simple interest saved does not offset the compound interest earned.

Not only does the retirement of the bonds have an effect on the fund "accounts in subsequent years," but it has an effect on the nominal accounts.

	Compound interest credited to income	Simple interest charged to income	Difference
First retirement \$15,000, 4 years before maturity			
4 years' interest on \$15,000	\$3,232.59	\$3,000.00	\$232.59
Second retirement \$15,000, 3 years before maturity			
3 years' interest on \$15,000	2,364.38	2,250.00	114.38
Third retirement \$15,000, 2 years before maturity			
2 years' interest on \$15,000	1,537.50	1,500.00	37.50
Fourth retirement \$15,000, 1 year before maturity			
1 year's interest on \$15,000	750.00	750.00	
	<hr/>	<hr/>	
	\$7,884.47	\$7,500.00	384.47
The fund is short the compound interest of			\$7,884.47
and the income is short			384.47

A point that is seldom taken into consideration in comparing the sinking fund with the serial redemption plan is that the company pays out more actual money the first part of the time under the serial plan and for the last part of the time less is paid out than under the sinking fund plan, the net result being that the total amount paid out when the bonds are redeemed and cancelled, that is under the serial plan, is less than the amount required to operate the sinking fund. Of course, as far as the

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company is concerned, the money, whether for fund or interest, paid to the trustee of the sinking fund is paid out just as much as if it went to outside holders of the bonds. The figures are as follows:

SINKING FUND PLAN PAYMENTS

Date	Fund cash	Fund interest	Outside interest	Total	Excess payments
End 1st year	18,097.48		5,000.00	23,097.48	
End 2nd year	18,097.48	904.87	4,095.13	23,097.48	
End 3rd year	18,097.48	1,854.99	3,145.01	23,097.48	97.48
End 4th year	18,097.48	2,852.62	2,147.38	23,097.48	1,097.48
End 5th year	18,097.48	3,900.12	1,099.88	23,097.48	2,097.48
	<u>90,487.40</u>	<u>9,512.60</u>	<u>15,487.40</u>	<u>115,487.40</u>	<u>3,292.44</u>

SERIAL PLAN PAYMENTS

Date	Bonds paid	Interest paid	Total	Excess payments
End 1st year	20,000.00	5,000.00	25,000.00	1,902.52
End 2nd year	20,000.00	4,000.00	24,000.00	902.52
End 3rd year	20,000.00	3,000.00	23,000.00	
End 4th year	20,000.00	2,000.00	22,000.00	
End 5th year	20,000.00	1,000.00	21,000.00	
	<u>100,000.00</u>	<u>15,000.00</u>	<u>115,000.00</u>	<u>2,805.04</u>
Excess sinking fund plan		487.40		487.40
		<u>15,487.40</u>		<u>3,292.44</u>

For large amounts extending over many years this excess might seem to be a great objection to the sinking fund plan, but the objection vanishes when the facts are considered.

The theory on which all sinking fund calculations are based is that money is worth a certain rate of interest whether in the hands of the company itself or of the fund trustee. This will not work out exactly in practice unless some way is found to realize the rate on the odd amounts of cash in the hands of the trustee, but the theory is true enough for all practical purposes. Therefore, in analyzing the conditions attendant upon the excess payment, compound interest on these payments must be debited and credited in order to find the actual net loss or gain made by the company under whichever plan it chooses to adopt.

In the example used the company has paid out on the sinking fund plan an excess of \$3,292.44 and under the serial plan an excess of \$2,805.04, a clear loss of \$487.40. However, it must be noted that the smaller excess

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is paid in the first two years and the larger in the last three, and the interest must be calculated to see to what extent the longer time offsets the larger amount.

Under the serial plan the company loses the use of		
\$1,902.52 for 4 years, on which the compound interest is	409.99	
902.52 for 3 years, on which the compound interest is	142.26	
	<hr/>	
Total loss		552.25
It gains the use of		
\$ 97.48 for 2 years, on which the interest is	9.98	
1,097.48 for 1 year, on which the interest is	54.87	64.85
	<hr/>	
Net loss of interest		487.40

That is, the serial plan in addition to \$15,000.00 actual interest paid loses \$487.40, making it cost exactly the same as the sinking fund plan.

It may be that the article intended to say that the choice of a plan would make no difference in the result, which is true, but it is far from true that it "would have no effect upon the accounts in subsequent years."

CALCULATING COMMISSION ON NET PROFITS

Editor, Students' Department:

SIR: I enclose a solution of a proposition which we ran into recently in auditing some cotton mill books, which may be of interest to your readers.

A corporation, having an average invested capital of \$250,000.00 for 1918, earned \$180,000.00 net. The average invested capital for the pre-war period was \$200,000.00; the average net earnings, \$40,000.00.

We find in the minute book, under date of January 1, 1918, the following resolution: "The treasurer shall receive a commission of 20 per cent. of the net profits after the excess profits, war profits and income taxes and his commission have been deducted. His commission is to be considered an administrative expense and is to be deducted from net earnings before the taxes have been computed."

What is the corporation's net profit? What is the treasurer's commission? What are the taxes?

Charlotte, North Carolina.

J. L. HOYLE, C.P.A.

Solution by Mr. Hoyle:

The taxes, without considering the commission to treasurer, would be:

Excess profits taxes			
20% invested capital	50,000.00		
Less credits:			
Specific deduction	3,000.00		
8% invested capital	20,000.00	23,000.00	
	<hr/>	<hr/>	
		27,000.00 @ 30% =	8,100.00
Net earnings	180,000.00		
20% invested capital	50,000.00	130,000.00 @ 65% =	84,500.00
			<hr/>
			92,600.00

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War profits taxes			
Net earnings	180,000.00		
Less credits:			
Specific deductions	3,000.00		
Average net earnings for pre-war period	40,000.00		
10% increase in invested capital	5,000.00	48,000.00	
	132,000.00	@ 80% =	105,600.00
Less excess profits taxes		92,600.00	13,000.00
<hr/>			
Income taxes			
Net earnings	180,000.00		
Less credit (specific deduction)	2,000.00		
	178,000.00		
Less excess and war profits taxes	105,600.00		
	72,400.00	@ 12% =	8,688.00
Total taxes			<u><u>\$114,288.00</u></u>

Now let X = Corporation's net profit

Y = Treasurer's commission

Z = Taxes

Equation (1) $X + Y + Z = 180,000$ net earnings.

The treasurer's commission is to be 20% of net profits after both commission and taxes have been deducted, and we have equation No. 2:

$$Y = 20\% [180,000 - (Y + Z)]$$

As 80% of \$132,000, the net amount of earnings less the war profits credits, is the sum of both the excess profits and war profits taxes, and as the income tax is 12% of earnings after the credit of \$2,000.00 and the excess and war profits taxes have been deducted, we have for our third equation:

$$Z = 80\% (132,000 - Y) + 12\% [(178,000 - Y) - 80\% (132,000 - Y)]$$

Simplifying equations Nos. 2 and 3, we have:

$$\text{(No. 2)} \quad 6Y + Z = 180,000$$

$$\text{(No. 3)} \quad 103Y + 125Z = 14,286,000$$

Multiplying No. 2 by 125 and eliminating "Z" by subtraction, we have:

$$750Y + 125Z = 22,500,000$$

$$103Y + 125Z = 14,286,000$$

$$647Y = 8,214,000$$

$$Y = 12,695.517$$

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Substituting the value of "Y" in equation No. 2, we have:

$$\begin{aligned} 6Y + Z &= 180,000 \\ Z &= 180,000 - 6Y \\ Z &= 180,000 - 76,173.10 \\ Z &= 103,826.90 \end{aligned}$$

Substituting the values of "Y" and "Z" in equation No. 1, we have:

$$\begin{aligned} X + Y + Z &= 180,000 \\ X &= 180,000 - (Y + Z) \\ X &= 180,000 - (12,695.52 + 103,826.90) \\ X &= 63,477.58 \\ X &= 63,477.58 = \text{Corporation's net profit} \\ Y &= 12,695.52 = \text{Treasurer's commission} \\ Z &= 103,826.90 = \text{Taxes} \end{aligned}$$

$$X + Y + Z = 180,000.00 = \text{Net earnings.}$$

$$\frac{20 [180,000 - (103,826.90 + 12,695.52)]}{100} = 12,695.52 = \text{Treasurer's com-}$$

mission, which was to be 20 per cent. of net profits after both commission and taxes had been deducted.

Computing the taxes on net earnings less the treasurer's commission, we have:

$$\begin{aligned} \text{Net earnings} &= 180,000.00 \\ \text{Treasurer's commission} &= 12,695.52 \end{aligned}$$

$$\text{Basis of taxes} = 167,304.48$$

Excess profits taxes

$$20\% \text{ invested capital} \quad 50,000.00$$

Less credits:

$$\text{Specific deduction} \quad 3,000.00$$

$$8\% \text{ invested capital} \quad 20,000.00 \quad 23,000.00$$

$$27,000.00 @ 30\% = 8,100.00$$

$$\text{Basis of taxes} \quad 167,304.48$$

$$20\% \text{ invested capital} \quad 50,000.00 \quad 117,304.48 @ 65\% = 76,247.91 \quad 84,347.91$$

War profits taxes

$$\text{Basis of taxes} \quad 167,304.48$$

Less credits:

$$\text{Specific deduction} \quad 3,000.00$$

$$\text{Average net earnings}$$

$$\text{for pre-war period} \quad 40,000.00$$

$$10\% \text{ increase in in-} \\ \text{vested capital} \quad 5,000.00 \quad 48,000.00$$

$$119,304.48 @ 80\% = 95,443.58$$

$$\text{Less excess profits taxes} \quad 84,347.91 \quad 11,095.67$$

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Income taxes

Basis of taxes 167,304.48

Less credit (specific deduction) 2,000.00

165,304.48

Less excess and war profits taxes 95,443.58

69,860.90 @ 12%

8,383.31

Total taxes

\$103,826.89

"Z" = 103,826.90

PROFIT PERCENTAGE BASIS

Editor, Students' Department:

SIR: If a corporation was authorized at \$250,000.00 but only issued stock to the amount of \$200,000.00 and after a number of years issued a stock dividend of the remaining stock, in making up statement at the end of the year would the percentage of profit be figured on the \$200,000.00 or \$250,000.00?

Would any credit items going through the surplus adjustment account have to be taken into account when making up income statement, such as correcting mistakes, stock discount or premiums, etc.?

If you will answer the above questions through your publication at your convenience you will greatly oblige

Yours very truly,

San Francisco, California.

E. H. B.

I understand that the questions contained in your letter refer to the financial statements rendered to the directors and stockholders, and not to the statements prepared for the income tax.

If by percentage of profit is meant that which is earned on the capital employed in the enterprise, the base of the calculation must not be the issued stock alone. The surplus or undivided profits must also be included. Surplus is just as much capital as is the paid-in stock. This is manifest in a partnership where the undrawn profits are at once added to the capitals of the partners. The fact that undivided profits are credited to a surplus account in a corporation does not change their nature.

As the stock dividend could not be declared except out of surplus, the issue of the stock does not change the total of the capital employed. It merely increases the issued stock and decreases the surplus to the same extent.

The percentage of profits to issued stock only would have no practical value, except to show what dividend is being earned. For this purpose the percentage would be on the basis of the entire issued stock after the dividend stock had been issued.

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Surplus adjustments would appear in an income statement in the final table as follows:

SURPLUS			
Adjustments detailed	0.00	Balance January 1	0.00
Corrected balance, down	0.00	Adjustments detailed	0.00
	<u>0.00</u>		<u>0.00</u>
	<u><u>0.00</u></u>	Corrected balance	<u><u>0.00</u></u>

And then the entries for the current year. If there are many items they may be detailed in a schedule and only the net result used here.

Book Reviews

INCOME TAX PROCEDURE 1919; by ROBERT H. MONTGOMERY. *The Ronald Press Company, New York.* \$6.00.

It has been stated that while theory without practice is useless, practice without theory is anarchy. Certainly the preparation of income tax returns, especially for corporations, without an exact knowledge of the regulations and a fair knowledge of preceding laws and their interpretation would result in the widest variations and in extreme departure from the treasury's understanding of the law. The author has therefore, performed a public service in bringing out the current edition of his *Income Tax Procedure* because it interprets both law and regulations and annotates the present law with precise references to previous ones and with illuminating comments on obscure sections. It required courage to present so formidable a volume within a few weeks after the passage of the law and before the regulations were available, but the result demonstrates the wisdom of the action. Previous editions had established the book as a standard guide in income tax matters and the present edition again reveals the author's exceptional knowledge of the laws and his astuteness in explaining the regulations and in suggesting interpretations where none has been proposed by the government.

Perhaps the most useful service performed by the book and its supplement is the thorough discussion of invested capital, with particular reference to inadmissible assets. Sections 325 and 326 of the law are dangerous ones to apply because, on first reading, their inherent ambiguity is not apparent and an incorrect interpretation of them with an underassessment or overassessment of the tax might readily result. As pointed out by the author, section 325 (a) "is not at all clear and can hardly be understood except by the use of several illustrations." Illustrative problems solved in detail, accompanied by copious comments and explanations presenting the underlying principles and stating the results sought to be obtained by the law, are of great assistance in involved cases.

Accountants who have to apply the law will agree with the author that the computation of invested capital should begin with a statement of capital stock and surplus, to be adjusted, instead of with a detailed list of assets. On pages 718 and 719 is a particularly valuable tabulation showing the additions and deductions which may be expected to affect the invested capital as determined at the beginning of the year. Opposite each item is a reference to the pages of the book where it is explained and discussed in detail.

The book as a whole may be said to be comprehensive and logically developed. An introductory chapter shows one the principal portions of

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1917 procedure which he must unlearn and by summarizing the 1918 law offers a perspective before the details are presented. Part I deals with application and administration and is followed by discussions of income and deductions. Part IV. is concerned with special classes of taxpayers and concludes the presentation of that part of the law imposing the income tax. Then follow the excess and war profits taxes and the text concludes with part VI which discusses the federal capital stock (excise) tax and the munition manufacturers' tax. The complete 1918 law is given in an appendix. A very complete table of contents and a forty-six page double column index are of material assistance. The book is well annotated and former procedures are explained in footnotes.

While the author gives no encouragement to those who seek to evade the tax, practical and helpful suggestions are made to enable a taxpayer to resolve reasonable doubts in his own favor, in accordance with the established principle of law that "such statutes are construed most strongly against the government, and in favor of the subjects or citizens, because burdens are not to be imposed, not presumed to be imposed, beyond what the statutes expressly and clearly import." For example, on page 49, the author points out that where several persons contribute to the joint support of several dependents, it may be desirable to allocate the contributions to particular dependents so that the taxpayer may be the chief supporter of certain individuals and thus become entitled to the dependent exemption.

In a brief review it is difficult to select portions for special comment. Throughout the book runs a thread of discussion on the fundamentals of accounting which makes it a valuable contribution to accounting literature apart from its function as a tax manual. It is a readable book because the author's personality pervades it—witness on page 142, where he comments on the average man's willingness to pay an exorbitant taxicab charge or tip an insolent waiter rather than undergo the unpleasantness of a row.

Anyone familiar with bureau methods in Washington will agree that some decentralization is advisable in order to avoid intolerable congestion. While uniformity should be sought, a slight compromise is justifiable when it will make for dispatch.

The book is encyclopædic and replete with practical suggestions for special types of taxpayers and special kinds of cases. Among many unexpected ideas is one that an individual may deduct the taxes paid by him in connection with club dues, railroad and Pullman fares and admission to places of amusement. This may induce more accurate account keeping, a point often urged by the author, and one may some day see individuals carrying pocket note books in which to record these taxes, heretofore ignored as deductible by the vast majority of individual taxpayers. An annual expenditure in such taxes could easily amount to \$50.00, in which case a deduction under a 12% tax would itself pay for this entertaining and practical book leaving all the other benefits derived as pure income—but too intangible to be subject to any tax which the most inquisitorial congress could conceive.

HAROLD DUDLEY GREELEY.

Book Reviews

NEW MODERN ILLUSTRATIVE BOOKKEEPING, Introductory course, by CHARLES F. RITTENHOUSE, C.P.A. *American Book Company.* 152 pp. Cloth, \$1.20.

There should be cause for much rejoicing at the appearance of this book. The great body of bookkeeping teachers is made up of two types—human teaching machines and teachers. The latter type is the product of or shows the influence of the modern school of thought. It rebels at having to teach principles which are unsound and practice which is not only obsolete but positively wrong. The teachers are therefore to be congratulated on the selection by the publishers of so able a person to revise *Modern Illustrative Bookkeeping*. The general result is most satisfactory.

Those who are disposed to be critical may of course find things to deplore. The discussion of "double entry bookkeeping," for example, misses the opportunity to bring out the fact that one set of entries records financial condition while the other set records the changes therein. It still clings to the traditional statement that "it is necessary to record both the thing received and the thing given."

Another thing which is subject to criticism is the discussion of the use of red ink. "If red ink is used at all by the bookkeeper, it is used for all ruling in the ledger and in books of original entry and in balancing ledger accounts." The reviewer is tempted to remark that the only bookkeepers who still use red ink are those who are ignorant of the fact that its use in books is obsolete or those who are forced by circumstances so to do. The sooner texts on bookkeeping unite in advising against a practice which is both time-consuming and unnecessary the sooner the practice will be discontinued entirely.

The revision as a whole meets the modern tests with regard to content, arrangement of material and method. It is a valuable addition to the supply of material available in this field.

JOHN RAYMOND WILDMAN

ELEMENTS OF BUSINESS, by PARKE SCHOCH and MURRAY GROSS. *American Book Company*, New York. 216 pp. Cloth, 88 cents.

Elements of Business is a striking example of the oft repeated remark that "a book should not be judged without first reading the preface." Without discovering what the authors seem to have in mind one would be tempted to describe the book in question as a compilation of the materials of business practice, lacking in correlation and without focus.

There is apparently little in this book which is not in numerous other books. It is divided into six parts with titles as follows: exchange, money and credit; banking and savings institutions; insurance; property; investments; letter writing; personal account records. The quality of the material is excellent; the exposition very interesting. From a practical point of view it will probably serve as an inexpensive compilation of good material.

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When one realizes that the motive which prompted the book was a desire to render social service, the objective becomes clear, the relations apparent.

JOHN RAYMOND WILDMAN

READINGS IN THE ECONOMICS OF WAR. Edited by J. MAURICE CLARK, WALTON H. HAMILTON, and HAROLD G. MOULTON. *University of Chicago Press*. \$3.00 net.

There are few students, professional or amateur, who do not long for some convenient method of preserving for future reference the data and opinions on contemporary problems which they read in current journals and books. We have all felt the exasperation incident to the vain attempt to locate a half-remembered statement which we would give much to be able to quote verbatim. It is all very well to say "always verify your quotations," but what if one can remember neither quotation nor the source?

Three professors, two of the university of Chicago and one of Amherst, recognizing the importance of contemporary thought before, during and after the great war, have collected and edited a series of articles on the economics of war, making a volume of some six hundred pages, "full of meat." It is not an economic text-book, but is intended to be used for collateral reading by students in economic courses. The source of every article or extract is given in foot-notes, a cursory perusal of which gives ample assurance of the impartiality exercised by the editors.

He will be a temerarious man, however, who attempts to read the book through in ordinary course. Mental indigestion at the least will be his fate.

W. H. L.

AUDITING PROCEDURE, by WILLIAM B. CASTENHOLZ, A.M., C.P.A. *LaSalle Extension University*, Chicago.

The LaSalle extension university has published this book by William B. Castenholz, which presumably is the official text-book of the institution on the subject of auditing procedure and we take it for granted that it is supplementary to a regular course on auditing theory. The author states specifically

"Not what and why, but how—that is the essential message of this book."

The contents of the book of 342 well-printed pages bear out this statement. As a guide to procedure the book is well worth having for reference by new practitioners.

W. H. L.

STORING: ITS ECONOMIC ASPECTS AND PROPER METHODS, by H. B. TWYFORD. *D. Van Nostrand Company*, New York.

The second half of this book, beginning with chapter VIII, will be found of great value to the public accountant. The question of inventories, always an important one and doubly so now that the federal income tax

Book Reviews

laws recognize the necessity of accurate inventories in ascertaining invested capital, has been a stumbling-block since time immemorial. Most of us side-step it by accepting the statements submitted by proper officers (see any standard work on auditing). This may be permissible but, be it noted, only on condition that the system in effect for recording stock is trustworthy and accurately kept. Mr. Twyford's methods and forms, with his practical suggestions to the storekeeping force, leave little to be desired, and are well worth studying by the auditor who is endeavoring to encourage scientific and systematic methods of stores accounting on the part of his clients.

W. H. L.

MODERN MANAGEMENT APPLIED TO CONSTRUCTION, by DANIEL J. HAUER. *McGraw-Hill Book Co., Inc.*, New York. \$2 net.

Modern Management is a book of some 180 pages on the application of scientific management to construction work. While it is an interesting study of modern methods in organization, accountants will find only a few pages (chapters 8 and 9) of any particular relevance, and those of quite general character. Accountants who are employed on construction work will find the book useful in helping them to get in touch with the engineers who are striving for the last word in efficiency.

W. H. L.

The Journal of Accountancy

Delaware Society of Certified Public Accountants

At the annual meeting of the Delaware Society of Certified Public Accountants, March 21, 1919, the following officers were elected: president, Peter T. Wright; vice-president, Will-A. Clader; secretary, William H. Van Hekle; treasurer, Clifford E. Iszard. All the officers and T. Whitney Iszard were elected members of the executive committee.

Joseph J. Mitchell and William B. Castenholz announce the formation of a partnership under the firm name of Mitchell, Castenholz & Co., with offices at 11 South La Salle street, Chicago, Illinois.

Robinson & Bours announce that H. Edwin Nowell has become a member of the firm and that their offices have been transferred to the Crocker building, San Francisco.

Baines, Bennett & Bennett announce the formation of a partnership, with offices at 110 West 42nd street, New York.

Loomis, Suffern & Fernald announce the removal of their offices from 149 Broadway to 54 Wall Street, New York.

Russell W. Bennett announces that he has reopened offices at 117 W. Forsyth street, Jacksonville, Florida.

The Baltimore Audit Company announces that Thomas L. Berry has become associated with the company.

Robert Douglas & Co. announce that Raymond D. Willard has been admitted as a partner in the firm.

Gordon Robb announces the opening of an office at 326 Chronicle building, San Francisco, California.

George B. Buist announces the opening of offices in the Fletcher Trust building, Indianapolis, Indiana.

Clarence R. Laws announces the opening of an office in La Salle building, St. Louis, Missouri.

The Journal of Accountancy

Official Organ of the American Institute of Accountants

Vol. 27

JUNE, 1919

No. 6

AMERICAN INSTITUTE OF ACCOUNTANTS

BOARD OF EXAMINERS

Examination in Auditing

MAY 15, 1919, 9 A. M. TO 1 P. M.

Answer all the following questions:

1. How would you verify the accuracy of accounts receivable from trade customers—
 - (a) In a detailed audit;
 - (b) In a balance-sheet audit?
2. In a balance-sheet audit how would you verify as to quantities and amounts the inventory items—
 - (a) Goods in process;
 - (b) Repair and replacement parts for the concern's product?
3. You are informed that during the period covered by a balance-sheet audit, which you have made, a defalcation was going on in the petty cash which was not discovered by you. You are asked to write a letter of explanation to the board of directors. Explain what you would do, and draft such a letter.
4. How would you treat cash discounts on capital expenditures, such as for new machinery?
5. In auditing the accounts of a corporation for the year ended December 31, 1918, you find that for the first time there were taken into consideration goods to be received after January 1, 1919, which you find were covered by firm contracts. The purchase price of the goods was charged to purchases account as of December 31, 1918, and

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credited to the vendor. In the inventory the goods were taken at 20 per cent. less than cost. You find that the market price was in fact 80 per cent. of cost. Tax statements have been prepared in accordance with the books.

Give your opinion as to the wisdom and propriety of the course adopted and your advice as to reflecting the foregoing in the balance-sheet.

6. Discuss the various methods of handling containers in different businesses? In each case describe the duty of the auditor.
7. In making an audit or investigation for the prospective purchase of a business to be followed by a report, including a balance-sheet and income and profit and loss statement, would you expect such a report to differ from the report which you would make based upon a balance-sheet audit directed to and made for the president of a corporation? If different, specify fully the points of difference.
8. How could a manager, who does not keep the books but is interested in the profits of one department of a business, unduly increase the amount of his compensation? In making an audit where profit-sharing agreements exist should an audit programme differ from that required where there are no such agreements? If so, why?
9. (a) Would you refuse to sign an audit certificate if you had been refused access to the minute book of a corporation?
(b) If the answer is "Yes" would you sign the certificate with a qualification?
(c) Mention five items for which you would look in examining a minute book.
(d) If the corporation were a "close" one and practically no minutes were kept, what action would you take and why?
10. When plant and deferred asset accounts are increasing, should an auditor attempt to ascertain whether or not production is increasing, to the same relative extent?

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What is the auditor's general duty in regard to (a) capital expenditures and (b) increases in inventories? Answer fully.

Examination in Commercial Law

MAY 15, 1919, 2 P. M. TO 6 P. M.

Give your reasons for all answers

NEGOTIABLE INSTRUMENTS

Answer three of the following four questions:

1. On the balance-sheet of a merchant there appears an item, notes receivable \$5,695.50. You find these notes on hand or in bank for collection. You also find that the merchant has discounted at his bank notes previously received by him not yet due amounting to \$11,000.00.
 - (a) Since these discounted notes are no longer held by the merchant, has he any further responsibility or liability?
 - (b) If so, describe its nature and what effect it may have on the balance-sheet.
2. In counting the cash in a mill office you find as part of the cash cheques which have been received from customers subsequent to the last bank deposit, which was made a week prior to your visit. The cheques are drawn on various widely scattered banks, including the mill's own bank, which is three miles away on a trolley line.
 - (a) What does the law require the holder of cheques to do?
 - (b) What danger, if any, may this mill incur in the collection of these cheques when it makes its next deposit?
3. Among the notes receivable of E F, whose books are being examined, are two promissory notes past due. The maker of both is A B, whose financial responsibility is doubtful. One of the notes bears the endorsement of B C, who is known to be "good." What steps should have been taken by E F on the dates when each of these notes fell due to protect his rights?

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4. (a) How does the certification of a cheque by the bank operate to change its nature in the hands of a holder?
- (b) Describe the words necessary to effect certification.

CONTRACTS

Answer two of the following three questions:

5. A calls B on the telephone and says: "I have fine apples at \$5.00 a barrel." B says, "I will take two barrels."
 - (a) Is this a good contract?
 - (b) What effect, if any, would be created if the same words had been expressed in a signed letter by A to B with B's signed reply?
 - (c) What additional effect, if any, would be created by a more formal expression of the same conversation in a "memorandum of agreement" signed by both parties and properly witnessed?
6. (a) What is the difference between an ordinary contract and one of suretyship?
- (b) What duty does the employer of a "bonded" cashier owe to the indemnity (or security) company during the term of the bond?
7. What is the difference between the contract called "installment lease" and one under which merchandise is sold on terms requiring payments of stated amounts in thirty, sixty, ninety and one hundred and twenty days after delivery?

CORPORATIONS

Answer both the following two questions:

8. In January of each year for several years the directors of a corporation have declared an annual dividend on the company's preferred stock at the rate specified on the certificates. In the balance-sheet of December 31st of each preceding year the treasurer sets up the amount of the dividend as a liability of the company. Does the liability item correctly represent the company's responsibilities to its preferred shareholders and the holders of its notes payable?

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9. (a) Describe some of the principal advantages obtainable through the incorporation of a business now owned by an individual.
- (b) Are there any disadvantages to be considered?

PARTNERSHIP

Answer both the following two questions:

10. In an agreement for sharing profits entered into between two partners of a business concern and three employees, how should the agreement read to distinguish it from one of general partnership?
11. (a) In examination of the business books of a partnership, for what document would you inquire for confirmation of the division of profits and amount of capital of the several members?
- (b) Describe several other important provisions which you would expect to find in such a document.

FEDERAL INCOME, WAR PROFITS AND EXCESS PROFITS TAXES

Answer both the following two questions:

12. You own two houses, in one of which you live. The other is leased to a tenant at a fixed monthly rental. You paid during 1918 real estate taxes to the state, county, city or township on both properties. You also paid for the repairs on both.
 - (a) Does the present federal income tax law make any distinction between the two properties as to these two classes of expenses?
 - (b) If so, explain the reason, if any, for the distinction.
13. A corporation owns and operates a rolling mill. In its expense accounts for 1918 are the following items of disbursement:
 - \$1,000.00 to Red Cross for services of nurse and for medicines at the mill's emergency hospital;
 - 500.00 to the war chest (a local community fund);
 - 100.00 annual dues in National Mill Owners' Association;

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500.00 to a local hospital for beds provided solely for the use of employees of the corporation;

250.00 to the Society for the Prevention of Cruelty to Children.

Specify which, if any, of these items the corporation may deduct from its gross income in determining its taxable income.

Examination in Accounting, Theory and Practice

Part I

MAY 16, 1919, 9 A. M. TO 1 P. M.

Answer all the following questions:

1. A has agreed to sell to B the goodwill of the X. Y. Co. on the basis of three years' profits of the business to be determined by you on sound principles of accounting as accurately as possible from the following statement handed you by A. You are required to compute the value of the goodwill, but are not expected to take into account any considerations outside those presented by the statements.

<i>Credits</i>	1st Year	2nd Year	3rd Year
Sales (selling prices substantially uniform during period)	\$638,400	\$602,500	\$564,000
Estimated value of construction work performed and charged to property	110,000	77,600	154,000
Appreciation of real estate upon revaluation by experts		80,000	
Profit on sale of Bethlehem Steel Co. stock....			85,000
Inventory at end of period:			
Production material at cost	72,000	103,100	106,600
Finished goods at selling prices	76,500	114,000	150,000
	<u>\$896,900</u>	<u>\$977,200</u>	<u>\$1,059,600</u>

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<i>Debits</i>	1st Year	2nd Year	3rd Year
Production materials purchased	\$233,000	\$252,400	\$220,300
Production labor	50,850	61,400	60,900
Production expense (including depreciation) ..	66,750	69,300	70,300
Selling expenses	52,500	55,650	62,800
Interest	96,000	94,000	98,500
Cost of construction work	74,600	49,000	86,000
Inventory at beginning of period:			
Production material at cost	51,400	72,000	103,100
Finished goods at selling prices	54,900	76,500	114,000
	\$680,000	\$730,250	\$815,900
Balance, being profit claimed by A.....	\$216,900	\$246,950	\$243,700

2. Does the basis of three years' profits for arriving at the goodwill outlined in the previous question appear to you to be reasonable upon the facts disclosed to you? If not, what advice would you offer upon the question if A or B were your client?
3. From the following balance-sheet and data
 - (a) Prepare corrected balance-sheet in appropriate form for the information of stockholders and auditors' certificate thereto.
 - (b) Show statement of adjustments to profits and surplus.

PASSAIC FALLS WOOLEN MANUFACTURING CO.

BALANCE-SHEET—JUNE 30, 1918

<i>Assets</i>	
Land	\$10,000.00
Buildings (brick)	100,000.00
Machinery	150,000.00
Steam power plant	25,000.00
Treasury stock common, 250 shares costing.....	20,000.00
Accounts receivable	50,000.00
Inventories June 30, 1918.....	75,000.00
Cash	20,000.00
	\$450,000.00

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Liabilities

Capital stock—common, par \$100.00.....	\$125,000.00
Capital stock—preferred 7% cumulative, par \$100.00..	100,000.00
Accounts payable	130,000.00
Undistributed earnings, June 30, 1917.....	60,000.00
Profits year ended June 30, 1918.....	35,000.00
	<hr/>
	\$450,000.00

Adjust the above figures in regard to the following:

- (1) Land is appraised at \$15,000.00 and is to be adjusted to that value.
 - (2) Give effect in the statements to depreciation of the wasting fixed assets for the year ended June 30, 1918, at rates considered fair.
 - (3) Dividends on the preferred stock have not been paid for years ended June 30, 1917, and June 30, 1918.
 - (4) Inventories are valued \$5,000.00 below cost.
4. It frequently happens that a corporation contracts to purchase property at an agreed price, which on the face of the contract is declared to be its value, and that by another clause in the contract, or by another contract, the vendors agree to provide, in addition to the property, a certain sum for working capital or even for free surplus.
- It is sometimes maintained that this free sum so provided is a profit or surplus of the new corporation available for payment of dividends if the directors so determine.
- Write a brief expression of your opinion as to the proper treatment of the sum turned back.
5. In examining the affairs of a manufacturing concern you find, among the assets, finished goods inventory of \$175,798.00 and ascertain that included in the above total is the sum of \$50,000.00 covering goods deposited as collateral to secure notes which are included in the notes payable account. How would you treat this in a statement prepared for credit purposes? Explain why.

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Examination in Accounting, Theory and Practice

Part II

MAY 16, 1919, 2 P. M. TO 6 P. M.

Answer questions 1 and 2 and any five of questions 3 to 13 inclusive:

1. The following trial balance of the B. C. Cotton Company is taken from the books after inventories and deferred charges have been posted. The accounts are ready to close for the period. The consigned goods account has been inactive for six months and will continue so for the present. Prepare statement to show for the quarter ended March 30, 1918, total manufacturing expenses, cost of goods made, cost of goods sold and net profit, and submit a balance-sheet as of March 30, 1918.

TRIAL BALANCE		
	DR.	CR.
Cloth		268,337.28
Labor	33,862.99	
Light	132.72	
Royalties	50.00	
Oils	38.62	
Finishing	7,455.55	
Cash	119,126.06	
Liberty bonds	1,000.00	
Supplies	1,276.06	
Starch	800.00	
Fuel	1,455.99	
Water	202.24	
Freight inward	1,353.99	
Accounts receivable	63,492.58	
Accounts payable		313.45
Notes payable		225,000.00
Building and machinery	341,378.14
Tenements	1,610.99	
Insurance	350.00	
Taxes	567.71	
General expense	542.88	
Rents receivable		378.87
Commissions	7,121.42	
Interest paid	2,539.90	
Discount taken		4,016.26
Purchases, material	162,403.68	
Surplus		168,866.14

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Discount allowed	899.50	
Capital stock		362,500.00
Waste sales		1,401.39
Inventory, Finished goods 3/30....	114,069.57	
" Process 3/30....	31,464.02	
" Materials 3/30....	113,860.99	
" Fuel 3/30....	1,250.00	
" Starch 3/30....	800.00	
" Supplies 3/30....	1,300.00	
Prepaid taxes 3/30....	208.96	
Unexpired insurance 3/30....	660.41	
Prepaid interest 3/30....	5,100.00	
Consigned goods 3/30....	14,438.42	
		\$1,030,813.39 \$1,030,813.39

Inventories of finished goods have been credited to cloth account and inventories of goods in process and materials to purchase account.

INVENTORIES JANUARY 1, 1918

Finished goods, January 1, 1918..	132,833.85
Goods in process, January 1, 1918..	22,258.01
Materials, January 1, 1918.....	143,566.55

2. From the following statement of facts set up the trial balance of the Broad Exchange bank, December 31, 1918, after closing, and prepare therefrom a condensed statement of condition as of the same date:

Due from banks, \$74,975; time certificates of deposit, \$10,000; cashier's cheques, \$496,349.75; rediscounts, \$400,000; customers' loans, \$500,000; bills purchased, \$550,000; exchanges for clearing house, \$320,000; due to banks, \$834,000; certified cheques, \$12,500; cash, \$956,750; demand certificates of deposit, \$2,500; transit department, \$100,000; on deposit with Federal Reserve Bank, New York, \$48,500; demand loans, \$125,000; time loans, \$80,000; bonds and mortgages owned, \$100,000; coupon deposits, \$3,750; on deposit with National City Bank, \$53,062.50; depositors, \$765,910; banking house, \$200,000; furniture and fixtures, \$25,000; capital stock issued and outstanding, \$500,000; securities owned, \$96,812.50; surplus, \$201,090.25; accrued interest receivable, \$1,075; interest purchased, \$125; unearned discount, \$5,200.

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3. Define:
- (a) Treasury stock.
 - (b) Nominal accounts.
 - (c) Accrued interest.
 - (d) Controlling account.
 - (e) Deferred charges.
4. What should be the controlling factor in determining whether or not certain items may properly be capitalized?
5. (a) How should a trading company, acting also as agent for an individual trader, show on its balance-sheet the unsold consigned goods of the principal?
- (b) How should the principal show the goods on his own balance-sheet?
6. Name the elements essential to the proper calculation of a depreciation charge.
7. How would you prove in quantities the inventory of materials at beginning of year if you had superintended an actual inventory at end of year?
8. Give journal entry to express the declaration of a dividend.
9. How would you treat unclaimed dividends?
10. Can you mention any distinction between dividends declared out of income and dividends declared out of profits realized from the increment of invested values?
11. Define:
- (a) Contingent liability.
 - (b) Actual liability.

ACTUARIAL QUESTIONS (OPTIONAL)

12. A bond, bearing interest at 5% per annum payable annually, and repayable in five years, with bonus of 10%, is for sale. What price can a purchaser pay who desires to realize 6% on his investment? ($V^s @ 6\% = .7473.$)
13. A lease has five years to run at \$1,000.00 a year payable at the end of each year, with an extension for a further five years at \$1,200.00 a year. On a 6% basis what sum should be paid now in lieu of the ten years' rent? ($V^s @ 6\% = .7473.$)

Growth of the Profession*

BY WALDRON H. RAND

I have been asked to speak upon the "Education of the accountant" or the "Growth of the profession."

These subjects seem so interwoven and dependent one upon the other, that what shall be said may apply to either or both. What I know about them is not the result of class-room work, but has been gathered from years of service on boards of examiners, years of correspondence and conversation with candidates for C. P. A. registration and with young men who wanted to become students of accountancy and some thoughtful consideration of the subject from close touch with those practising the profession of public accounting.

Of colleges and departments of universities for the instruction of students in classes I have a list of about 70. The entrance requirements for these institutions vary from those which give elementary instructions to those which require the possession of a preliminary degree of A. B. or its equivalent. Few of this class of institutions conduct correspondence courses. (In the last report of the American Institute of Accountants' committee on education there were three out of a total of 23 reporting.) Most of the instruction by correspondence is in the hands of private concerns. Some of these latter schools have grown very large, possess faculties of greater or less national prominence as professional accountants, and the courses and methods of some of them receive approved recognition.

Instructors in several of these schools of accountancy have organized the American Association of University Instructors in Accounting. This association has a membership of 122 and embraces representatives of 64 institutions, besides several members at large, not representing any particular institute. There are said to be only 14 C. P. A.'s included in this membership. It has just held its third annual meeting in convention at Richmond, Virginia. One of the very desirable results which it is hoped will be attained through the efforts of this organization is the standardization of courses of instruction.

*An address before the New York State Society of Certified Public Accountants, April 14, 1919.

Growth of the Profession

There are thousands of students in attendance at accounting schools, yet few of the graduates achieve the distinction of registration as certified public accountants. Out of 23 schools mentioned in the last report of the committee on education, 19 give a training preparatory to C. P. A. examination; one does not; and three not primarily. Only three of the number conduct correspondence courses; one in farm accounting only, and 19 not at all. From the whole 23 mentioned only 190 graduates have passed the C. P. A. examination, and of this number 140 are graduates of a New York university.

About 750 candidates have been examined in the last 10 years in Massachusetts, and of this number 201 candidates have passed, 41 of whom passed at the last examination.

Why is this so? Why do so few pass? Let us see—we have the instructor; we have his courses and methods of instruction; we have the student, and we have the C. P. A. examination. Where lies the fault which is responsible for so few becoming certified public accountants?

I would suggest three reasons for this:

1st. Too few teachers have been properly and thoroughly prepared to teach.

2nd. The student has not been made to understand what he has been taught.

3rd. The student has not been made to apply, practically, what he has learned theoretically.

We must bear in mind, concerning the first reason given, that the examinations present little difficulty until the candidate comes to practical accounting—to the solving of problems. Comparatively little trouble is found in law or theory or even in auditing.

Now these problems, themselves, have been suggested by the examiners largely out of their own experience. They are original, novel to the candidate and to almost everybody, but every care is taken to prevent ambiguity and uncertainty of statement. In fact, in the marking of papers, when the candidate explains his understanding of the problem and does good work on it as a basis, whether right or wrong, he will get a credit.

The examiners are practising accountants. The instructors are not. Of the 23 colleges already mentioned, nine have no C. P. A.'s in their faculties. One can scarcely expect a student, or worse

still, a class of students, to be prepared by a teacher to pass an examination, which the teacher himself has not passed—perhaps could not pass.

We are glad to be able to state, however, that there has been recently a decided change for the better. There is a strongly growing disposition to improve and standardize the courses of instruction, and the instructors' work as exemplified in the national association seems very encouraging. There has been also a growing disposition among instructors in accounting subjects themselves to pass the C. P. A. examination. Were it possible to secure in schools more of the services of practising accountants as teachers it would induce a more practical application of what is taught and a better understanding by the student.

The second reason is that the student has not been made to understand what he has been taught. When he sees the same child in a new dress, he does not recognize it at all. The boy who had learned that 5 and 5 made 10, did not recognize the fact that 6 and 4 also made 10. There is knowledge without understanding. The student often studies accounting as some do a language. He neglects the grammar of it.

President Daniel R. Hodgdon of the College of Technology of Newark, New Jersey, in an address, delivered recently in Chicago, on living and dead science in the schools, said:

"Teachers are too likely to use a strictly scientific language, which is too scientific and too indefinite for the boy or girl to understand. In a test recently I found a lack of ability to tell exactly what was meant when students tried to express themselves in some scientific terms. Three questions were asked: What is a molecule? What does it look like? Have you seen one? The members of the class were all graduates of a high school and were entering a normal school with physics and chemistry as a prerequisite. A number explained a molecule as a small round thing in things. One young lady insisted that she had seen one. Several said that their teachers had seen them.

"What we need," continued President Hodgdon, "is the vitalization of science 'as she is taught.' The boy who knows all about inertia in his text-book, would never think of it as responsible for his fall when he stubs his toe."

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The third reason might be made to include the second. The student does not practically apply what he has learned theoretically. One must understand the theory and apply it in practice to be recognized as an accountant. Theory is abstract knowledge. It subsists in the mind only, but is based on principles verifiable by experiment or observation.

I regard theory and practice both as important, but theory should go far enough to teach the reason why. The practical application of what the student has learned is absolutely necessary.

Seymour Walton wrote a paper upon *Practical Application of Theoretical Knowledge* which was read at the annual meeting of the American Institute of Accountants in Washington, D. C., September, 1917, and in it he said, "The accountant should cultivate the habit of investigation. He is fortunate indeed if he is born with this desire, if his mind is constantly on the alert, unwilling to let anything pass that is not understood; but if this habit is not innate, it can easily be cultivated, until it becomes second nature."

Mr. Walton is right, and, judging from his work, I think students would be made to understand if he had his way. Roosevelt said that no man ever really learned from books how to manage a governmental system.

So far as the technical examination is concerned, whatever may have been a just criticism of these examinations in the past, in various states, there has been brought about a great change through the national board of examiners. The board of examiners of the American Institute of Accountants is making uniform a standard examination, which is required by itself of all candidates for membership in the institute, and this has already been adopted by twenty states in lieu of their former state examination. We regard this change as a decided improvement over what was the condition in many states. And there is a doubly attractive feature for the candidate because he receives credit by the American Institute of Accountants as well as by his own state board for good work done.

The public accountant of today must be a student of business and economic laws, possessed of a talent for organization and system and the determination of costs. He must be skilled in deep delving after facts, frequently through a maze of records,

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in order to obtain a detailed statement of operations and the resultant balance-sheet. And in the performance of these duties and the pursuit of these objects, he must be tactful and thoroughly sincere and perfectly honest.

What kind of impression would the public accountant make upon the business man, his client, were he unable to talk intelligently of the state and federal taxes or to advise concerning the organization of an office force, a system of accounting or what must be included in determining costs?

Of what earthly use are his efforts as an auditor unless his skill enables him to secure the facts of the real transactions of a business instead of depending upon transactions "as shown by the books?"

In all his contact with men, in the performance of these duties and the pursuit of these objects, he would be worse than useless if not sincere and honest; and he would increase his troubles a hundredfold if not tactful.

We are occupying a closer confidential relation with our clients, and with a greater number of them, than ever before. In the effort to comply intelligently with the requirements of the tax regulations our advice is considered second to none. The accountants' courageous attempts to present honestly the results of business and the present worth of enterprise is recognized by government and the business public. Probably we say No! to our clients as often as does the doctor to his patients. Our advice is sought and our conclusions are accepted.

The merchant finds he can shift his responsibilities upon his auditor. The taxpayer finds it desirable to employ the accountant to construct his returns. The bank finds it can have faith in a certified balance-sheet. The investing public learns to look for the public accountant's certificate of accuracy and truth-telling.

Recently a certified public accountant of Massachusetts was excused from service upon a jury for the reason, as stated by the court, that his occupation was in the nature of a public necessity.

We are a patriotic body. When the history of the world war is rightly written there will be found sincere recognition bestowed upon members of our profession who have been called to high and responsible service in the departments of government, who

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have been depended upon for valuable assistance and in many cases for guidance in the confused conditions almost everywhere existing, brought about by the unprecedented magnitude and intricacies of the enterprise. You well know that members of our institute have been called to fill many high positions in the government. I have a list of 127 members of the American Institute of Accountants called to serve our government in responsible positions.

I want to speak to you about our membership in the American Institute of Accountants.

Many of you are co-members with me—I wish you all were—and I trust and expect you all will be sometime.

There was a time when the New York State Society of Certified Public Accountants and other reputable C. P. A. state societies were constituent members of the national body, the American Association of Public Accountants.

In those days we used to elect delegates, one to every ten members, to represent our state societies in convention. These delegates carried the proxies of our total membership in their pockets, and according to the size of their state societies were they influential in convention. Some members played politics in those days and rare and intensely interesting were some of the occasions, well remembered.

We have outgrown this old order of things. No longer are our state societies constituent members of a central organization. So far as my observation goes, the fun and hazard of scheming for votes sufficient to carry or to defeat proposed action is a thing of the past.

We have now an institute consisting of individual members and associates. We took over as charter members individually everyone in good standing in the old association. No new member can be elected without having passed a technical examination before our own board of examiners—not an appointive but an elective board—and without five years' practical experience immediately preceding the date of his application.

Each member is entitled to represent by proxy only five others, all of whom must be residents of his own state, and there is no power of substitution.

Moreover it is provided now that in lieu of a special meeting of the council any question may be submitted for vote by cor-

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respondence, and in lieu of a special meeting of the institute the president may be directed to submit to the entire membership any question for a vote by correspondence.

We have grown into an individual membership with individual and personal responsibilities, and it has been suggested that even the five proxies are perhaps five too many.

Is this change resulting well? I believe it is.

Was it a sense of personal responsibility that induced some of our leading men to start by most generous amounts our endowment fund? I believe it was. It was a feeling of personal responsibility coupled with love for our profession and a belief in the wisdom of this course of manifestation that brought from a host of our members subscriptions to this fund of more than \$150,000—now invested mostly in government securities and guaranteeing the longevity, the perpetuity of the institute and the splendid work thus inaugurated.

Primarily this endowment fund was to establish and maintain a statistical library for use of our members, and for a while the real significance of this great thought did not sink very deeply into the minds of our members, especially those located at a distance from the library headquarters. Even in Boston was heard the criticism that such an enterprise was a good thing doubtless for New York, New Jersey and Philadelphia, but how could it benefit Boston?

Well, only recently I thanked a Boston accountant for making a second donation to the fund and he responded that in his case it had turned out a good investment, "for," said he, "I wrote the librarian and secured some information by return mail that I could not obtain in Boston for \$200."

So numerous recently have been the demands by members upon our statistical library, we have been obliged to employ an assistant librarian.

Another very important agency of the institute is THE JOURNAL OF ACCOUNTANCY. You each get your monthly copy. You pay for it in your dues, so you must get it. The JOURNAL is the mouthpiece of our profession. The committee in charge has done and is continuing to do good work in its management. It is well edited. It is a profitable enterprise. It should be made more so—more subscriptions—more advertising. Professor Rittenhouse, head of the department of accounting of Boston

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university, college of business administration, told me the other day that 125 of his undergraduates were subscribers to the JOURNAL. One of my first recommendations to the student in accounting is to subscribe to the JOURNAL.

We have in the institute a dozen or more standing committees and special committees. The organization is published in the JOURNAL. Generally the work of such committees depends upon references from the council or its executive committee, but I feel sure the various chairmen are so interested in the duties of their offices that they will welcome correspondence with individual members. This is *your* institute and we all look to the individual member to make good by participation in such of these lines of activity as most appeal to him.

I could enlarge upon the thought of the personal responsibility of each of us to be *in* the work of our institute as well as *of* it. I could dwell upon any particular activity and tell you how. But it would be largely reiteration and unnecessary in this case, although important in some cases.

If the thought of personal responsibility as related to your individual membership in the institute penetrates to your inner conscience, I feel that there will be taken a great onward step in the right progress of our beloved profession by the creation of increased activities in every department of the institute's work.

Our members are scattered among all the states, and we would welcome additions of experienced practitioners to this membership in every case where character and ability are possessed. It is not the practice or intention of our board of examiners to discourage by too severe examination men of this sort.

You should be like watchers in towers all over the country to observe things and report to your central office in New York.

Your effort is to maintain in the state societies a local appreciation and observance of all that you have adopted as good in the institute, and I think it is highly important and distinctly desirable that these state societies should possess a closer and more intimate relationship with our national institute.

Operations of the Grain Corporation*

BY ALEXANDER SCOTT BANKS

With the entrance of the United States into the world war, proper regulation, apportionment, distribution and rapid movement of basic food products became a vital necessity. At the same time a plan had to be evolved by which prices could be held at a reasonable level.

A central control system was accordingly created by the president's proclamation of August 14, 1917, and embodied in the form of a board, under the direct supervision of Herbert C. Hoover and the United States food administration, known as the "Grain corporation." The capitalization of this corporation was fifty million dollars, consisting of five hundred thousand shares of stock with a par value of one hundred dollars, all belonging to the United States government, except directors' qualifying shares, which were sold to the directors but only held by them in trust for the use and benefit of the United States.

The Grain corporation, organized on the lines of some of our large industrial corporations, was given absolute control by the government over the purchase and sale of all wheat and flour produced in the United States. Subsequently, the government designated this corporation as its sole agent for the purchase and sale of rye, beans, barley, rice, cereal products, peas, corn, butter oil and rolled oats; and having thereby become the largest buyer of these products likewise, the Grain corporation, in addition, actually controlled the entire market in practically all these commodities. In fact this corporation virtually became a great monopoly, controlling all supplies at the large terminal points and distributing them to the mills and wholesalers throughout the country.

In addition, the corporation resold for export such quantities of these products as the United States could afford to part with, after making due allowance for the needs of this country—the allied governments having agreed to purchase all available quantities at cost to the Grain corporation—therefore the Grain corporation was secured against any loss whatever.

*A lecture delivered before the students of New York University school of commerce, accounts and finance.

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The operating organization of the Grain corporation consisted of the most prominent and expert grain men in the United States, who, when called upon, gave their services without compensation, and in addition very patriotically severed their existing connections with all grain interests. This organization was composed of a board of directors and executive officers, such as president, vice-president, secretary and treasurer, and for the purpose of proper administration, the entire territory of the United States was divided into fourteen zones, which covered the important terminal commercial markets. These zones were located at New York; St. Louis, Missouri; Portland, Oregon; New Orleans, Louisiana; Philadelphia, Pennsylvania; Duluth, Minnesota; Minneapolis, Minnesota; Baltimore, Maryland; Chicago, Illinois; Buffalo, New York; San Francisco, California; Kansas City, Kansas; Omaha, Nebraska, and Galveston, Texas, under the jurisdiction of the president of the corporation in the New York territory and second vice-presidents in the other zone localities. These officers acted as government buyers of the various products at the several points, and administered the affairs of the Grain corporation in their entire zones, carrying on transactions with growers, dealers and wholesalers and selling wheat to millers for domestic consumption and other products through usual channels. This work was done in co-operation with the federal food administrators that had been appointed for each state and each county in each state, who looked after the enforcement of the legal phases of the food administration.

In the case of grains, a proclamation issued by the government made it necessary for all operating plants, country elevators, terminal elevators and mills of all kinds exceeding seventy-five barrels capacity daily to obtain a license and to be governed by regulations set forth by the government food administration, in order that all might perform their duties in an equitable manner and also avoid unfair practices. Detailed reports of supplies on hand, additions, shipments, etc., were required to be made regularly to the Grain corporation, so that each zone's supplies were constantly familiar to headquarters, which made it possible quickly to bring about necessary adjustments. Grain supplies in storage were limited to no more than thirty days' milling consumption, excepting by special arrangement with the Grain corporation, and mills were not permitted to sell flour for longer deferred ship-

ments than thirty days, thus eliminating all chance of speculation (grain exchanges having been ordered by the government to suspend all dealings and quotations on futures) and preventing possible hoarding.

A milling division of the food administration, organized to co-operate with the Grain corporation and headed by noted millers from various sections, regulated the milling trade by obtaining a standard agreement from all millers to operate on one basis, which bound them to buy and sell only at the direction of the grain corporation, and in doing so to maintain the fair price basis fixed by the Grain corporation price commission (detailed price schedules having been adopted by said commission after careful consideration of the conditions entering into production in each locality), even to the extent of discontinuing milling operations if it were not possible to secure their milling supply on the agreed-upon basis.

When disputes arose as to price basis fixed by Grain corporation representatives, grading, etc., in certain transactions in different sections, the machinery of a standing advisory board, which had been created to adjudge such disputes, was invoked and ultimately all matters were settled satisfactorily.

The Grain corporation did everything possible to obtain necessary supplies for the millers, who agreed to operate on the profit basis fixed by the food administration (plus actual cost of production, which was reported in itemized statements), namely 25 cents per barrel profit. The licensee further agreed that an authorized representative of the food administration was at full liberty to inspect any and all property stored or held in possession or under control of licensee and all his records, no information so obtained, however, to be divulged to other sources than the United States food administration. Shippers and dealers, when ordered to ship, would do so to one of the Grain corporation buying zones, and would be remitted to by the Grain corporation when material was unloaded and checked by government inspectors (licensed by the secretary of agriculture), on the basis of weights, quality, etc., at government price basis.

Dealers, furthermore, in carrying out the orders of the Grain corporation, were insured against loss by reason of decline in prices, as the form of contract entered into with the Grain corporation was so drawn that it offered ample protection against a

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decline in value of material stored at instance of the Grain corporation, in case the buying level of the Grain corporation at any of the standard zone terminal markets was lowered, thereby also protecting any financial or banking loans made on the material.

Beyond first supplying the calls of the Grain corporation, dealers were not restricted as to buyers or markets, but could not hold their prices in excess of cost of materials and actual expenses, plus the reasonable margin of profit stipulated by the food administration.

While there was no restricted or specific "fair price basis" placed on the other products handled by the Grain corporation, outside of wheat and flour, in view of the fact that the corporation was at all times the largest buyer of these products from the growers in all sections of the country, it naturally was in a position definitely to regulate fair prevailing prices at which these commodities could be dealt in, and practically did so throughout the entire country at all times.

The cardinal object of the Grain corporation was so skillfully to manœuvre the allotment and distribution of the constantly changing supplies of available products throughout the country that there would always be on hand a sufficient supply in each locality according to its requirements. This made necessary the continuous adjustment of stocks by diverting supplies from one section to another, according to urgency of calls therefor. Having complete control over the situation and being informed as to quantities on hand in each zone at all times, as well as average requirements, the Grain corporation was in a position to order special calls from certain sections promptly filled from other sections, as well as quick replenishment of low stocks in different zones, even though such zones were distant from zones that had supplies on hand. These operations, in normal times, would have been impracticable, owing to large expense of transfer involved. In this way serious shortages were avoided, and there was a comparatively even distribution of all commodities produced.

Conferences were called at intervals by the president of the Grain corporation of the representatives of the grain trade in the United States, at which times there were important discussions and exchanges of views on the various phases of the grain situation, and methods were adopted to meet certain problems that had arisen from time to time.

The Grain corporation was in reality used by the food administration as a concrete method of purchase and sales accounting, being a properly constituted and independent auditing committee which had been set up to check the details of transactions at every point, through reports and statements which were constantly being rendered to it from each zone, covering every individual transaction. The corporation was self-sustaining in that its operating expenses were covered by an administration fee of one per cent. which it charged buyers on the gross amount of each transaction, for its service. This fee covered the corporation's office expenses and included cost of storage and handling.

Each Grain corporation zone or agency was conducted as a separate unit, having been provided with a working cash fund from the central office at New York, to which office it reported its total transactions by telegraph daily and furnished detailed figures covering all its accounts, together with complete monthly statements of its earnings, which enabled the New York office constantly to have available what amounted to an exact duplicate set of books showing the accounts of all its agencies, which were periodically verified by traveling representatives of the Grain corporation's auditors. The working fund of the zones (which in a sense was their capital) was not a fixed sum, but was adjusted from time to time as the needs of the agency required. The agencies were required monthly to remit their earnings to the general office and in turn they were reimbursed by the general office for their expenses.

The method employed in financing the operations of the Grain corporation consisted of the use of trade acceptances to a considerable extent. Some two hundred and thirty millions of dollars were borrowed on trade acceptances and notes during the year 1918. The collateral upon which the acceptances were issued represented elevator receipts covering wheat owned by the various agencies. As the New York office required collateral for acceptances issued, it would instruct the agencies to deposit in their local banks collateral for the number of bushels required. The local banks would then hold this collateral "in trust" for the New York bank which acted as trustee for the collateral upon which the acceptances were issued and the acceptances were endorsed to

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this effect. The agencies were permitted to make substitutions of this "in trust" collateral so that they could move any particular lot desired.

In this manner the Grain corporation's central office was in a position to put in circulation some fifty million dollars' worth of acceptances each month, all maturing in three months (some of which covered renewals that were issued from time to time). Numerous banks throughout the country were the holders of such acceptances at various times.

The fixed capital of the Grain corporation was increased by the food administration from fifty million dollars to one hundred and fifty million dollars during the fall of 1918, and in addition a loan was obtained from our allies of two hundred million dollars, the business of the Grain corporation having grown to such large proportions.

The stupendous magnitude of the operations of the Grain corporation can best be illustrated by figures covering its purchases and sales of various products during 1918, which included total purchases of wheat amounting to \$1,086,000,000, flour \$437,400,000, rye \$40,000,000, beans \$25,000,000, barley \$15,000,000, rice \$15,000,000, cereal products \$18,000,000, peas \$2,200,000, corn \$1,200,000, butter oil \$1,200,000, rolled oats \$200,000; and total sales of wheat amounting to \$818,000,000, flour \$398,000,000, rye \$18,000,000, beans \$18,000,000, barley \$8,000,000, rice \$11,000,000, cereal products \$15,000,000, peas \$1,700,000, corn \$800,000, butter oil \$1,200,000, rolled oats \$200,000; and in addition miscellaneous commodities were purchased for the committee for relief in Belgium and European relief amounting to \$60,000,000.

It might be noted here that its exceptionally well organized system and the control exercised by the Grain corporation were of untold benefit to the allies in alleviating the condition of the distressed populace of Belgium by the rapid movement of commodities. Shipments were made on all vessels that could possibly be requisitioned. At the same time the scant supplies of all other allied countries were replenished.

The total sales of the Grain corporation for 1918 amounted to \$1,330,000,000, and the disbursements were \$1,800,000,000, with a large inventory remaining on hand. These huge sums involved in the operation of the Grain corporation are greater than even the

business done by some of our largest industrial corporations, the total yearly business last reported by the United States Steel corporation being \$1,205,000,000, and that of Swift & Co., for 1918, \$1,200,000,000.

The vast operations of the Grain corporation which have been enumerated were accomplished with the comparatively insignificant permanent investment, including fixtures and equipment, of about \$165,000, as contrasted with the enormous investment of other American industrial corporations in machinery and equipment, amounting in some cases to hundreds of millions of dollars and necessitating the labor of hundreds of thousands of employees. The total number of employees in the central office of the Grain corporation at New York approximates 500, and its total running expenses, including zone agencies, amounted in 1918 to some \$1,800,000, while handling and storage of commodities totaled \$2,750,000, the government not carrying any insurance on its property.

Considering that an exceedingly well regulated method of proper collection and distribution of food products was established by the Grain corporation, and the tremendous volume to which its operations rose in such brief space of time from its inception, great tribute is due the men who labored to bring about this result and were instrumental in rendering such valuable service in feeding the populace of this country and its allies.

Power and Service Costs

BY FREDERIC WILLIAM KILDUFF

Although the problems that deal with the mechanical and operating efficiency of the generation, transmission and application of power and services lie within the province of the engineer, the financial efficiency is for the accountant to decide. By financial efficiency is meant the ascertainment of the costs of the various elements in the power classification and the comparison of them with some ideal standard.

Since the word power has by usage come to be considered electrical power, when used in reference to costs, this definition will be applied to the following discussion, and all other power, whether expended on prime movers or not, will fall within the classification of services. Theoretically, this is not correct, for services are usually conveniences instituted for the benefit of the employees. But practically this arrangement is satisfactory and has the approval of engineers and accountants who have given the subject enough study. To classify high pressure steam and drinking water under the same head seems hardly logical, for one is indeed power used for production, while the other has nothing to do with transmitting its energy to a machine or engine but is merely a convenience for the worker. Nevertheless, it has been found more advantageous to use the following classification of power and services as shown below with the units by which their costs are measured.

Power	Name	Unit
1. Power		K. W. H. (kilowatt hours)
Services		
1. High pressure steam		1,000 lbs.
2. Low pressure (process) steam		1,000 lbs.
3. Lavatory hot water		1,000 gals.
4. Cold water		1,000 gals.
5. Drinking water		1,000 gals.
6. Compressed air		1,000 cubic feet
7. Heat.		1,000,000 B. T. U.

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In this classification there are two units that will probably cause trouble in understanding to the accountant with little or no mechanical experience. These units are kilowatt hours and B. T. U. (British thermal unit). Perhaps it will clear up matters a little if the accountant will realize that as gallons and pounds are the names of units by which various substances are measured, so kilowatt hour is the name of a unit by which electrical power is measured, and British thermal unit is the name given to a unit by which heat is measured. Their electrical or thermal equivalents may easily be found in any number of books on engineering or physics.

Power and service costs are separated for accounting and engineering reasons, into three divisions:

- a. Generation cost.
- b. Transmission cost—from powerhouse to outside walls of manufacturing buildings.
- c. Transmission cost—within manufacturing buildings.

In a manufacturing plant with its power house detached from the manufacturing buildings, the following definitions of the above divisions will hold true invariably, while if the power house is not so detached, conditions will slightly change. Our discussion assumes the first condition.

Generation cost

Generation cost is that cost incurred in changing one form of energy into another. It constitutes all the costs within the power house—the supplies, the coal, the labor, the overhead consumed in this conversion. In the case of power this generation cost is carried up to the busbars, while in case of services, the cost of generation is carried up to the meters just before the different elements leave the power house.

Transmission cost (from powerhouse to outside walls of manufacturing buildings)

This cost considers only the cost of transmitting the various forms of energy (power and services) from the power house to the outside walls of the manufacturing buildings. The cost is chiefly a maintenance charge, and has most to do with the repairing and upkeep of the transmission lines, either wiring or piping.

Power and Service Costs

Transmission cost (inside the manufacturing buildings)

This is the cost of maintaining and operating the various transmission lines within the manufacturing buildings themselves. It includes internal transmission cost up to the point where the energy is used.

In dividing our power and service costs into the three divisions as shown above, it is possible at times to adjust our power and service rates by the correction of perhaps one separate division instead of all, should only one flat rate from generation to application be used. Again, the division allows for a comparison not only with each other, but with division rates for different periods and different plants of the same concern. If there are marked differences, the explanation for these, such as load factors, time of operation, etc., should be forthcoming. The increasing or the decreasing of equipment in operation—with qualifications, of course—reduces or raises respectively the cost per unit of power or service. This results from the fact that additional operated equipment increases the units consumed in a greater percentage than the rise in the percentage of cost, and vice-versa where the opposite is true.

As the total cost of any of the eight classes is separated into three divisions described above, so each division in turn is also separated into three subdivisions. In other words, generation, transmission external and transmission internal costs are each composed of the following:

1. Operation cost.
2. Maintenance cost.
3. Fixed charges of capital.

Operation cost is that charge resulting from the supplies and labor consumed to keep the generating units in motion. Maintenance cost represents the expenses incurred in the upkeep of generation and transmission equipment. Fixed charges of capital represent the cost of the service of capital.

If the analysis is carried still further and if generation cost be used as an example to illustrate the other two divisions, the following schedule will result:

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Generation cost

1. Operation cost
 - a. Material
 - b. Labor
 - c. Overhead
2. Maintenance cost
 - a. Material
 - b. Labor
 - c. Overhead
3. Fixed charges of capital
 - a. Depreciation
 - b. Obsolescence
 - c. Insurances
 - d. Taxes

Having prepared the outline above, it at once becomes apparent that items which compose it must be supported by details that originate from some record such as time slips, material requisitions, purchase journal or journal entry. Although the details below, under each caption of material, labor and overhead, may not be all inclusive, yet they are believed to be comprehensive enough to illustrate. It will be remembered that the cost of generation is being used as an example of all three divisions.

Generation cost

1. Operation cost
 - a. Material
 1. Coal
 2. Water
 3. Lubricants
 4. Miscellaneous materials
 5. Miscellaneous charges
 - b. Labor
 1. Boiler room
 2. Turbine room
 3. Pump room
 4. Compressors
 5. Refrigerating
 6. Electrical
 7. Miscellaneous

Power and Service Costs

c. Overhead

1. Proportionate part of janitors' labor
2. Proportionate part of watchmen's labor
3. Proportionate part of chief engineer's labor
4. Proportionate part of chief engineer's assistant's labor
5. Proportionate part of power engineer's force

2. Maintenance cost

a. Material for

1. Building
2. Boilers
3. Boiler room auxiliary apparatus
4. Turbines
5. Pumps
6. Compressors
7. Refrigerating machinery
8. Auxiliary apparatus
9. Electrical apparatus
10. Piping
11. Wiring
12. Miscellaneous

b. Labor for

1. Buildings
2. Boilers
3. Boiler room auxiliary apparatus
4. Turbines
5. Pumps
6. Compressors
7. Refrigerating machinery
8. Auxiliary apparatus
9. Electrical apparatus
10. Piping
11. Wiring
12. Miscellaneous

- c. Overhead
 - 1. Same items as make up overhead on operation cost
 - 2. Proportionate part of works engineer's office force
- 3. Fixed charges of capital
 - a. Depreciation
 - b. Obsolescence
 - c. Insurances
 - d. Taxes

These fixed charges apply, first, to the land occupied by the power house and all other land necessary for its operation, such as coal storage and condenser ponds; second, to the power house building itself and all auxiliary structures such as oil houses, bunkers and chimneys; third, to all equipment within the power house covered by the twelve classes already given.

For generation cost, then, fixed charges of capital apply on the following investments:

- 1. Land used by power house.
- 2. Power building and auxiliaries.
- 3. Equipment necessary for generation or conversion.

It is not practicable to analyze in detail the charges that make up the eight separate classes of power and service costs, in the same manner as described above in finding the cost of the generation of power. There are two reasons for this: first, it would require too much accounting to obtain the necessary information; second, no real benefit would accrue from the extreme accuracy, the more practical way being nearly as accurate and just as good for engineering and administrative purposes.

The method used in practice to ascertain the cost of generation is to total up the material, labor and overhead in all the operating and maintenance costs, and distribute this total to the various power and service divisions on the basis of the steam heat consumed by each division. Then to the amounts that are applicable to each division are added the fixed charges of capital applied to the investment in the equipment, plus a proportion of the capital charges on the land and buildings. This proportion is based on the percentage that the equipment in each division bears to the entire equipment of all divisions.

Power and Service Costs

The power department reports of any well organized manufacturing concern will show the number of million B. T. U.'s going to the various units, and if the heat that each unit absorbs is compared with the total heat absorbed by all units, it will give a percentage to each, which can be applied against the total generation cost—that is, operating and maintenance.

For example, if during a given period the total number of B. T. U.'s absorbed by all power and service divisions were 102,205 million, and the number absorbed by each division were that shown in column one (1), the percentages shown in column two (2) would be the percentages used to distribute the operating and maintenance cost for that period. Let \$20,000.00 be the total cost for the period and column three (3) will be the distribution.

GENERATION COST

Operating and maintenance

Name	Million B. T. U.'s	Per cent.	Distribution
Power	54,857	53.69	\$10,738.00
High pressure steam	9,539	9.33	1,866.00
Low pressure steam	8,286	8.11	1,622.00
Hot water	1,556	1.52	304.00
Cold water	501	.49	98.00
Drinking water	66	.06	12.00
Compressed air	3,500	3.42	684.00
Heat	23,900	23.38	4,676.00
Totals	102,205	100.00	\$20,000.00

The first step in finding the generation cost of the eight divisions is to distribute the total operating and maintenance expenses within the power house to these divisions on the basis of the heat units consumed by each. This has been shown in the illustration above.

The next and final step is to ascertain the capital charges on the equipment, buildings and land used by each division. To

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find the investments in the equipment is not difficult, for a proper analysis of the equipment account will produce them. To find the proportions of the land and buildings occupied and apportionable to each division is not so easy. In fact, due deliberation must be given as to the correct method to be used, as a method hastily adopted may lead to inaccurate costs. In the majority of cases the following method may be used to advantage.

First find the investment in the land and buildings used in the production of power and services. Next find the investment in the equipment of each separate division, and totaling all equipment thus found, compute the percentage that each division bears to this total. Then apportion the investment in land and buildings according to these eight percentages.

For example, let the following illustrate:

Name of division	Amount of investment in equipment	Per cent. to total equipment
Power	\$400,000.00	57.5
High pressure steam	30,000.00	4.3
Low pressure steam	20,000.00	2.9
Hot water	6,000.00	.8
Cold water	3,000.00	.4
Drinking water	7,000.00	1.1
Compressed air	80,000.00	11.5
Heat	150,000.00	21.5
Totals	<u>\$696,000.00</u>	<u>100.0</u>

Now, having found these percentages, and assuming that the investment in the land is \$4,000.00 and the investment in the buildings is \$300,000.00, a schedule may be made in the form below.

Land, \$4,000.00
Buildings, 300,000.00

Power and Service Costs

Name of division	Percentage to be used	Investment in land apportioned	Investment in buildings apportioned
Power	57.5	\$2,300.00	\$172,500.00
High pressure steam	4.3	172.00	12,900.00
Low pressure steam	2.9	116.00	8,700.00
Hot water	.8	32.00	2,400.00
Cold water	.4	16.00	1,200.00
Drinking water	1.1	44.00	3,300.00
Compressed air	11.5	460.00	34,500.00
Heat	21.5	860.00	64,500.00
Totals	100.0	\$4,000.00	\$300,000.00

The point has now been reached where, the capital investments having been brought together, it is possible to apply the capital charges, namely, depreciation, obsolescence, insurance and taxes. It will be seen upon a moment's reflection that all these charges will not be placed against the investment divisions. For instance, while all may be said to apply against equipment and buildings, taxes only are chargeable to land.

In regard to the charge for depreciation, it may be of interest to know that our best steam engineers consider that the power house building itself should have the same rate of depreciation as the equipment for the generation of power, namely, the turbines and generators. This rate is approximately 5 per cent. The engineers contend that when the time comes when new or perhaps larger units are to be installed, it is economically and mechanically better to build a new power house.

The charges for insurance and taxes can easily be found by a proper analysis of the above two accounts and a proper distribution to the eight divisions.

Thus having obtained the expense of operation and maintenance, and having found the proper charges for the use and protection of the capital investment, a final amount is found which, if divided by the units consumed during the period covered by the cost figures, gives the unit cost of the power or service. The accompanying schedule will illustrate.

COST OF POWER AND SERVICES
GENERATION

Name	Unit for cost purpose	Total units consumed	Total investment	Investment		
				Equipment	Buildings	Land
Power	K. W. H.	2,000,000 K. W. H.	\$574,000	\$400,000	\$172,500	\$2,300
High pressure steam....	1,000 Lbs.	9,000,000 Lbs.	43,072	30,000	12,900	172
Low pressure steam....	1,000 Lbs.	5,500,000 Lbs.	28,816	20,000	8,700	116
Hot water	1,000 Gal.	900,000 Gal.	8,432	6,000	2,400	32
Cold water	1,000 Gal.	15,000,000 Gal.	4,216	3,000	1,200	16
Drinking water	1,000 Gal.	150,000 Gal.	10,344	7,000	3,300	44
Compressed air	1,000 Cu. Ft.	50,000,000 Cu. Ft.	114,960	80,000	34,500	460
Heat	1,000,000 B. T. U.	23,900 Million B. T. U.	215,360	150,000	64,500	860
Totals.....			\$1,000,000	\$696,000	\$300,000	\$4,000

Name	Fixed charges		Operating and maintenance cost	Total cost	Unit cost
	Depreciation and obsolescence	Insurance and taxes			
Power	\$2,385.42	\$958.00	\$10,738	\$14,081.42	\$.007041
High pressure steam....	178.75	71.78	1,866	2,116.53	.23517
Low pressure steam....	119.58	48.03	1,622	1,789.61	.3253
Hot water	35.00	14.05	304	353.05	.39227
Cold water	17.50	7.03	98	122.53	.00817
Drinking water	42.92	17.24	12	72.16	.481
Compressed air	477.08	191.60	684	1,352.68	.027053
Heat	893.75	358.93	4,676	5,928.68	.24802
Totals.....	\$4,150.00	\$1,666.66	\$20,000	\$25,816.66	\$

The Journal of Accountancy

Published monthly for the American Institute of Accountants by
THE RONALD PRESS COMPANY, 20 Vesey Street, New York, N. Y.
Thomas Conyngton, President; L. G. Henderson, Secretary;
Hugh R. Conyngton, Treasurer.

A. P. RICHARDSON,

Editor

EDITORIAL

What the Profession Offers

The superintendent of education in an American city made the assertion the other day that accountancy was the best paid profession, and for that reason he recommended that those of his students who were qualified by nature for analytical work should turn their attention to the study preparatory to entering the profession.

It is quite remarkable to find a statement of this sort by a man not engaged in business and supposedly not in touch with the actual practice of public accounting. It indicates that what accountants have known for some time is beginning to penetrate to the general public.

As a matter of fact the accounting profession is probably the best paid in the world. If there be a profession in which the average compensation is higher it is not known to us. The law and several other professions frequently lead to the accumulation of large fortunes, but accounting has seldom done so. Indeed, we have yet to hear of a great fortune made solely from the practice of accounting. Nevertheless the statement of our superintendent of education is correct. While a lawyer here or there makes a great deal of money legitimately from the practice of law, there are for every success many failures, and if it were possible to ascertain the average income derived from the practice of law we should probably find that the lawyer as a whole is not to be envied, at any rate in point of monetary compensation.

It is notorious that men who enter the church do so at the sacrifice of all prospect of financial prosperity derived from pro-

fessional work. It has been stated that the average income of clergymen throughout the country is somewhere in the neighborhood of \$900 per annum. Figures in this case are more readily ascertainable than in any other profession.

Practitioners of medicine and surgery affirm that the average income in their profession is far below the living requirements of even an unmarried man in these days of high prices.

In other professions such as architecture, engineering, pedagogy, etc., the average income is far from satisfactory to the recipients, but we have no actual figures from which to ascertain what is the average rate of return from the practice of any of them. Various estimates have been made, and although it may not be safe to accept any one as accurate, they are probably near enough to the facts to give a fairly correct indication of true conditions.

In an endeavor to determine the average income of the man whose vocation is public accounting we have taken into consideration the varying fees prevalent in different parts of the country. For example, in New York, Chicago and other cities of the first class it is generally found that the fees charged by accountants are greater than those obtained in the small cities. When we come to even smaller communities where there may be only one or two accountants in practice the fees are proportionately less. In certain sections of the country it may be that the highest annual income of an accountant is below the average of the entire country. There are men practising in small towns whose total net income is less than the salary of a well qualified junior accountant in New York. On the other hand the number of men in the small communities is so much less than the number practising in large cities that the small rate of compensation obtained by the former is more than offset by the larger return of the latter.

A few years ago it would have been a difficult matter to find in the United States a dozen accountants whose total net income from the practice of their profession would average \$50,000 per annum. Today we believe there is a score of men whose net incomes range from \$100,000 per annum upward.

Taking into consideration all the factors which we have mentioned and also the prevailing salaries for qualified accountants in accounting offices, it appears that the public accountant

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practising on his own account or in the employ of another accountant earns an annual income somewhat in excess of \$3,000. In this average we include men who have advanced somewhat beyond the initial stage of junior, but we have omitted the young man who is employed in an accounting office in no more responsible position than that of a clerical assistant.

Assuming that this estimate of \$3,000 per annum is reasonably near the facts, it becomes evident that the statement made by our superintendent of education is correct. There is no other profession of which we have knowledge concerning which so striking a report could be made.

Reasons for the comparatively generous compensation of accountants are not far to seek. In the first place the work is highly technical and can be permanently undertaken only by men with experience and ability of a peculiar nature. In the second place the supply is far short of the demand, and by every indication the lack of balance between supply and demand will continue for many years to come.

In view of these facts it seems strange that there are not more newcomers every year in the profession. Our colleges and other accounting schools are turning out men with a good theoretical knowledge, and most of these men are aware of the opening which accounting presents. Many of them make a serious effort to establish themselves in professional work, but only a few succeed. This fact is due almost entirely to the lack of appreciation on the part of such men as to what actually constitutes the equipment and obligation of the successful public accountant.

We have repeatedly drawn attention to the need for more young accountants and many of our correspondents have been inclined to challenge our statements when they have sought employment in accounting offices and have failed to obtain it. They point out that the compensation offered to junior accountants is not sufficient to be attractive. They prefer to enter some vocation in which they can receive immediately a better return, and in many of these vocations upon which they enter they remain for years without material advancement; whereas the able and earnest young man who enters accounting with a determination to stick to it until an assured position is reached will probably attain a competent livelihood sooner than the man who seeks immediate return.

The accounting profession has much to offer to the man who will work and who will make the initial sacrifice which is often required. The labor is extremely arduous and at times both mentally and physically exhausting. If the young man or woman is ready and able to pass through the probationary period the results are reasonably sure, and we believe that if these things could be impressed upon the minds of the younger generation, if the prospect of future successes could be justly weighed against a possible higher immediate compensation, the present dearth of accountants would soon be diminished.

There is need for accountants. There is ample compensation for accountants. There is no prospect that the supply will overtake the demand within the lifetime of even the youngest of us.

The Profession Honored

Members of the accounting profession of the United States and Great Britain will learn with pleasure that Arthur Lowes Dickinson has received the honor of knighthood from King George.

Sir Arthur Dickinson's services during the war have been of a distinguished and valuable kind, particularly in regard to coal control, and it is eminently fitting that one of the leaders of the profession should receive this mark of his sovereign's favor.

He is a member of the American Institute of Accountants, fellow of the Institute of Accountants of England and Wales, and a certified public accountant of New York and other states.

We cordially congratulate the recipient of the honor and the profession to which he belongs upon this official token of national appreciation.

Income Tax Department

EDITED BY JOHN B. NIVEN

In the April number was given a full list of contents with copious extracts of the regulations governing the administration of the income tax law, in the preliminary form in which they were at first issued. The treasury department has since published, under T. D. 2831, a revised edition of these regulations, known as regulations 45. The new edition is in one compact volume (in place of the two preliminary instalments) and, in addition to the arrangement of the table of contents by which the articles are enumerated consecutively under their governing sections of the law, there is a valuable subject index at the end. Many amendments have been made in the regulations: new articles have been inserted, numerous topics re-named, others combined, regrouped or entirely eliminated. Consequently, the list of contents previously published being obsolete, we print herewith the revised table, for the purpose of giving a correct and comprehensive bird's-eye view of the rules now in force. We have indicated by asterisks articles which are wholly or partly new matter or have been materially altered; and we also give the text of certain articles, not previously published, which are of particularly timely interest (indicated in the list of contents in italic type).

An addition to article 23 supplies what had previously been lacking, the procedure to be followed when the basis of reporting is changed as between the cash and accrual methods. If the change is from the cash to the accrual basis, report the previous accruals, both debit and credit, not already reported, as well as those for the year for which the return is made; but if the change is from the accrual to the cash basis, exclude revenue receipts and disbursements already returned in previous years as accruals. In both cases mention the fact of the change, and state the amounts involved.

Three new articles (Nos. 52-54) amplify further the principles involved in determining when income is to be accounted for.

The rules on amortization of war plants or vessels (articles 181-188 herewith) have been entirely re-written and enlarged. The loss from this source as determined by sale, abandonment or, if continued in use, by reproduction cost in April, 1919, is to be spread over the period from January 1, 1918, to the date of abandonment or to April, 1919, as the case may be. Full proof of the supporting facts is required, and the allowance will be finally determined on re-examination within three years after the close of the war.

The subject of losses on inventories because of the sudden termination of hostilities is another question in regard to the working out of which much doubt has existed. This is now minimized by a new series of regulations (articles 261-268, also published herein). A mere shrinkage in value is not the kind of loss that is deductible; it must be an actual net loss

on sale in 1919 or on reinventory at the close of 1919 if the goods are then on hand. Although claims for refund may be filed once the inventoried goods are sold, claims for abatement on the ground of shrinkage in value of goods not sold will not be passed upon until after the close of 1919, when the taxpayer must in both cases file a detailed accounting for his 1918 inventories. The only advantage in filing a claim for abatement when the goods have not been sold is in saving the payment of an excess tax for the time being, and this benefit may be lost if the claim is not sustained and interest at 12 per cent. per annum is charged.

The preparation of consolidated returns is so much a matter of accounting that we give here the vital revised regulations on the subject, dealing with both the consolidation of income (articles 631-34, 636-37) and the consolidation of invested capital (articles 864-869).

Under T. D. 2836 have been enumerated the tax exemptions applicable to Liberty bonds and victory notes in effect from January 1, 1919. Besides the exemption of the new notes from normal tax and of the 3¾% series from surtaxes, an additional exemption from surtaxes on previous issues is granted on three times the amount of Victory notes subscribed for and kept, up to \$20,000 of principal, and a further exemption, not dependent at all on subscriptions to the fifth loan, of \$30,000.00 of principal.

REGULATIONS RELATING TO THE INCOME TAX AND WAR PROFITS AND EXCESS PROFITS TAXES

UNDER TITLES II AND III OF THE REVENUE ACT OF 1918

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Income

Art. 23. Bases of computation.—The return of income shall in every case be made on the basis clearly reflecting the income, including such items of income and deductions as properly would have been included in the return for the preceding taxable year had the present basis been used, but which were not so included, and excluding such items of income and deductions as would have been excluded from the return for the preceding taxable year had the present basis been used, but which were in fact included. A separate statement shall be attached to the return showing in detail all such items and the reasons why they were excluded or included in the return for the preceding taxable year. If in the opinion of the commissioner the net effect of such items upon the net income for the taxable year indicates that the returns for any previous years did not approximately reflect the true income for such years, amended returns for such years may be required.

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Art. 52. When included in gross income.—Gains, profits and income are to be included in the gross income for the taxable year in which they are received by the taxpayer, unless they are included when they accrue to him in accordance with the approved method of accounting followed by him. See articles 21-24. Lands which are received as compensation for services in one year, the title to which is disputed and in a later year adjudged to be valid, constitute income to the grantee in the former year. On the other hand, a person may sue in one year on a pecuniary claim or for property, but money or property recovered on a judgment therefor rendered in a later year would be income in that year, assuming that it would have been income in the earlier year if then received. This is true of a recovery for patent infringement. Bad debts or accounts charged off because of the fact that they were determined to be worthless, which are subsequently recovered, whether or not by suit, constitute income for the year in which recovered, regardless of the date when the amounts were charged off. See articles 111 and 151. In view of the unusual conditions prevailing at the close of the year 1918 it is recognized that many items of gross income, such as claims for compensation under cancelled contracts, together with claims against contracting departments of the government for amortization and other matters, while properly constituting gross income for the taxable year 1918 were undecided and not sufficiently definite in amount to be reported in the original return for that year. In every such case the taxpayer should attach to his return a full statement of such pending claims and other matters, and when the correct amount of such items is ascertained an amended return for the taxable year 1918 should be filed.

Art. 53. Income not reduced to possession.—Income which is credited to the account of or set apart for a taxpayer and which may be drawn upon by him at any time is subject to tax for the year during which so credited or set apart, although not then actually reduced to possession. To constitute receipt in such a case the income must be credited to the taxpayer without any substantial limitation or restriction as to the time or manner of payment or condition upon which payment is to be made. A book entry, if made, should indicate an absolute transfer from one account to another. If the income is not credited, but is set apart, such income must be unqualifiedly subject to the demand of the taxpayer. Where a corporation contingently credits its employees with bonus stock, but the stock is not available to such employees until the termination of five years of employment, the mere crediting on the books of the corporation does not constitute receipt. The distinction between receipt and accrual must be kept in mind. Income may accrue to the taxpayer and yet not be subject to his demand or capable of being drawn on or against by him.

Art. 54. Examples of constructive receipt.—Where interest coupons have matured, but have not been cashed, such interest payment, though not collected when due and payable, is nevertheless available to the taxpayer and should therefore be included in his gross income for the year during which the coupons matured. This is so if the coupons are exchanged for other property instead of eventually being cashed. Dividends on corporate stock are subject to tax when set apart for the stockholder, although not yet collected by him. See section 201 of the statute and articles 1541-1549. The distributive share of the profits of a partner in a partnership or of a stockholder in a personal service corporation is regarded as received. See section 218 of the statute and articles 321-335. Interest credited on savings bank deposits, even though the bank nominally have a rule, seldom or never enforced, that it may require so many days' notice in advance of cashing depositors' cheques, is income to the depositor when credited. An amount credited to shareholders of a building and loan association, when such credit passes without restriction to the shareholder, has a taxable status as income for the year of the credit.

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Where the amount of such accumulations does not become available to the shareholder until the maturity of a share, the amount of any share in excess of the aggregate amount paid in by the shareholder is income for the year of the maturity of the share.

Amortisation

Art. 181. Scope of provision for amortization.—Any allowance made to a taxpayer by a contracting department of the government or by any other contractor for amortization or fall in the value of property, either as a part of the cost of production or as a part of the price of the product, shall be included in gross income. See article 52. The amount to be allowed as a deduction from gross income for amortization for the purpose of the tax is to be based upon the provisions of articles 181 to 188, pursuant to which the deduction should be made instead of upon the basis of any amounts contractually or otherwise determined. The allowance for amortization covers the decline in value of the property subject thereto and is inclusive of the depreciation which would ordinarily be allowable separately. Depreciation for any taxable period after December 31, 1917, should, therefore, not be claimed with respect to property as to which an allowance for amortization is claimed. See also section 204 of the statute and articles 1601-1603.

Art. 182. Property cost of which may be amortized.—The taxpayer may make a reasonable deduction from gross income not in excess of a sum sufficient to extinguish the cost of buildings, machinery, equipment or other facilities constructed, erected, installed or acquired on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war, and of vessels constructed or acquired on or after such date for the transportation of articles or men contributing to the prosecution of the present war. In the case of property the construction or installation of which was commenced before April 6, 1917, and completed subsequently to that date, amortization will be allowed with respect only to the cost incurred on or after April 6, 1917.

Art. 183. Cost recoverable through amortization.—The total amount to be extinguished by amortization, in general, is *the excess of the unextinguished or unrecovered cost of the property over its maximum value (either for sale or for use as part of the plant or equipment of a going business) under stable post-war conditions.* Under the provisions of the statute authorizing re-examination of the claim at any time within three years after the termination of the present war, the allowance will be finally determined upon such basis. However, in many cases it will be impracticable during the calendar year 1919 to make final determination either of the length of the amortization period or of the value of the property under stable post-war conditions. Consequently in returns made during the calendar year 1919 the amortization allowance will tentatively be determined in accordance with articles 184 and 185.

Art. 184. Cost which may be amortized.—For the purpose of making returns in 1919 the total amount to be extinguished by amortization is the difference between the value of the property on the bases indicated below and the original cost of the property less any amounts otherwise deducted for depreciation, losses, etc., prior to January 1, 1918; or in the case of property acquired or completed after December 31, 1917, it is the difference between the value of the property on the bases indicated below and the cost of such property at the date of acquisition or completion.

(1) In the case of property useful only during the war period and permanently discarded at the date of the return the basis is the salvage value as of the date when the property was discarded.

(2) In the case of property still in use which will not be required for the future use of the business and which is certain to be permanently

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discarded before the last instalment payment of the tax covered by the return, the basis is the salvage value as of the date when the property will be permanently discarded.

(3) In the case of other property the basis is the estimated reproduction cost as of April, 1919, of such property in its then condition. In the final determination such cost will be ascertained under stable post-war conditions, without reference to such date.

A special record of all property falling in classes (1) and (2) must be preserved by the taxpayer and the commissioner must be promptly advised (a) if such property is restored to use; (b) the selling price if sold; and (c), if still on hand and not in use at the close of the three year period, the reasons why such property has not been disposed of.

Art. 185. Method of amortization.—For the purpose of making returns in 1919 the amount to be extinguished by amortization shall be spread in proportion to the net income (computed without benefit of the amortization allowance) between January 1, 1918, and the following dates: (a) if the claim is based on subdivision (1) of article 184, the date when the property was permanently discarded; (b) if the claim is based on subdivision (2) of article 184, the date upon which the property will be permanently discarded; and (c) if the claim is based upon subdivision (3) of article 184, April, 1919. All taxpayers claiming an allowance for amortization will be required to estimate the amount of their net income for the period between January 1, 1918, and the dates specified above, and also to estimate what part of such net income is properly allocable to the calendar year 1918 and what part thereof is properly allocable to the calendar year 1919. Such estimates shall be the basis for apportioning the amounts to be extinguished by amortization between the calendar years 1918 and 1919. Taxpayers reporting on the fiscal year basis (a) in all computations based upon 1918 rates shall use the amount of such allowance apportioned to the calendar year 1918; (b) in any computation based upon 1919 rates for a year beginning in 1918 and ending in 1919 shall use the amount of such allowance apportioned to the calendar year 1919; and (c) in any computation for a fiscal year beginning in 1919 shall use as many twelfths of the allowance apportioned to the calendar year 1919 as there are months of such fiscal year falling in the calendar year 1919.

Art. 186. Additional requirements for amortization.—Claims for amortization must be unmistakably differentiated in the return from all other claims for wear, tear, obsolescence and loss. No such claim will be allowed unless it is reflected in any accounts submitted by the taxpayer to stockholders and in any credit statements by the taxpayer to banks, and is given full effect on his financial books of account. If government or other contracts taken by the taxpayer contained recognition of amortization as an element in the cost of production, copies of such contracts shall be filed with the taxpayer's return, together with a statement and description of any sums received on account of amortization and the basis upon which they were determined. In any case in which an allowance has been made for amortization of cost the taxpayer will not be allowed to restore to his invested capital for the purpose of the war profits and excess profits tax any portion of the amount covered by such allowance.

Art. 187. Redetermination of amortization allowance.—A redetermination of the deduction allowed on account of amortization may, or at the request of the taxpayer shall, be made by the commissioner at any time within three years after the termination of the present war, and if as a result of an appraisal or from other evidence it is found that the deduction originally allowed was incorrect, the amount of tax due for each taxable year during the amortization period will be adjusted by additional assessment or by refund.

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Art. 188. Information to be furnished by taxpayer.—To obtain the benefit of this provision of the statute the taxpayer must establish to the satisfaction of the commissioner that the entire deduction claimed and the proportion claimed for any particular year are reasonable. The taxpayer shall also submit a supplementary statement setting forth the following information: (a) a description of the property in reasonable detail; (b) the date or dates on which the property was acquired and from whom, or, if constructed, erected or installed by the taxpayer, the dates on which such construction, erection or installation was begun and completed; (c) evidence establishing the intention of the taxpayer on and after April 6, 1917, or on and after the date of acquisition or the date of beginning construction, erection or installation, to devote such property or vessels to the production of articles (or, in the case of vessels, the transportation of articles or men) contributing to the prosecution of the present war; (d) the cost of construction, erection, installation or acquisition; (e) the value of the property after termination of the amortization period; (f) a segregation of the property permanently discarded, or of the property which will be permanently discarded before the last instalment payment covered by the return; (g) all deductions from gross income otherwise taken or claimed with respect to such property; (h) the computation by which the total amount to be extinguished by amortization was determined; and (i) the computation by which the proportion of the amortization charge claimed as a deduction in the taxable year for which the return is being made was determined.

Losses in inventory

Art. 261. Losses in inventory and from rebates.—Taxpayers are allowed deductions from net income for the taxable year 1918 for losses resulting (a) from material reductions after the close of the taxable year 1918 of the values of inventories for such taxable year, and (b) from actual payments after the close of the taxable year 1918 of rebates in pursuance of contracts entered into during such year upon sales made during such year. The taxable year of the taxpayer, whether calendar or fiscal, is meant in every case. Such deductions may be secured by two methods, either by a claim in abatement or by a claim for refund, and must not be entered upon the regular return.

Art. 262. Loss from rebates.—Where after the close of the taxable year 1918 rebates have been bona fide paid in pursuance of contracts entered into during such year upon sales made during such year, the net income for that year may be reduced by the deduction of the amount of such rebates actually paid. No such deduction will be allowed unless the profits from such sales have been included in the income for the taxable year 1918.

Art. 263. Loss in inventory.—Inventory losses are allowable either (a) where goods included in an inventory at the end of the taxable year 1918 have been sold at a loss during the succeeding taxable year, or (b) where such goods remain unsold throughout the taxable year 1919 and at its close have a then market value (not resulting from a temporary fluctuation) materially below the value at which they were inventoried at the end of the taxable year 1918. No deduction is allowable for losses of anticipated profits or for losses not substantial in amount, nor for physical damage or obsolescence occurring in the taxable year 1919. In determining whether goods included in an inventory at the end of the taxable year 1918 have been sold during the succeeding taxable year, and whether loss has resulted therefrom, sales of goods made in the taxable year 1919 will be deemed to have been made from the inventoried stock of 1918 until such inventoried stock is exhausted.

Art. 264. Loss where goods have been sold.—Where goods included in the inventory at the end of the taxable year 1918 have been sold during

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the succeeding taxable year, the loss which may be deducted from net income for the taxable year 1918 is the amount by which the value at which the goods sold were included in the inventory exceeds the actual selling price minus a reasonable allowance for selling expenses and for manufacturing expenses, if any, incurred in the taxable year 1919 and attributable to such goods.

Art. 265. Loss where goods have not been sold.—Where goods included in the inventory at the end of the taxable year 1918 have not been sold during the succeeding taxable year, the loss which may be deducted from net income for the taxable year 1918 is the amount by which the net income for such year would be reduced if the inventory were redetermined and such goods taken at their market value (ignoring mere temporary fluctuations of value) at the end of the taxable year 1919.

Art. 266. Claims.—Claims in abatement should be filed with the collector on form 47 when the return for the taxable year 1918 is made. Claims for refund should be filed on form 46 not later than 30 days after the close of the taxable year 1919. Each claim shall contain a concise statement of the amount of the loss sustained and the basis upon which it has been computed, together with all pertinent facts necessary to enable the commissioner to determine the allowability of the claim. The amount allowed by the commissioner in respect of any such claim shall be deducted from the net income for the taxable year 1918 and the taxes shall be recomputed accordingly. Any excess paid over the tax due shall be credited or refunded to the taxpayer. See section 252 of the statute and articles 1031-1038. In computing income for the taxable year 1919 the opening inventory must be properly adjusted by the taxpayer in respect of any claim allowed for the year 1918 under this article.

Art. 267. Disposition of claims.—A claim for loss resulting from rebates paid or from actual sales will be decided as soon as practicable after it has been filed. A claim for loss in inventory not realized by sale will be decided only after the close of the taxable year 1919 upon the basis of any permanent reduction in the level of market values which may occur during such year from the inventory values taken at the close of the taxable year 1918. Not later than thirty days after the close of the taxable year 1919 a taxpayer who has filed either a claim in abatement or a claim for refund, or both, shall submit to the commissioner a descriptive statement showing the quantity and kind of all goods included in the 1918 inventory which have been (a) sold at a loss in the taxable year 1919, (b) sold at a profit during the taxable year 1919, or (c) not sold or otherwise disposed of during the taxable year 1919, together with such other information in respect of such goods as the commissioner may require. A claim filed with the return for a loss not then realized by sale will be passed upon in the light of any sales thereafter made during the taxable year 1919. A claim filed with the return is authorized for the purpose of allowing the taxpayer to utilize, where justified, a preliminary allowance for inventory losses and not to provide a deduction essentially different from that taken by way of a claim filed at the end of the taxable year 1919.

Art. 268. Effect of claim in abatement.—In the case of a claim in abatement filed with a return, payment of the amount of the tax covered thereby shall not be required until the claim is decided, provided the taxpayer files therewith a bond on form 1124 in double the amount of the tax covered by the claim, conditioned for the payment of any part of such tax found to be due with interest at the rate of 12 per cent. per annum. The bond shall be executed by a surety company holding a certificate of authority from the secretary of the treasury as an acceptable surety on federal bonds and shall be subject to the approval of the commissioner. See also section 1320 of the statute. If abatement of any

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part of the tax covered by such a claim is denied, then such part shall be paid by the taxpayer with interest at the rate of 12 per cent. per annum from the original due date of the tax.

Consolidated returns—Income

Art. 631. *Affiliated corporations.*—The provision of the statute requiring affiliated corporations to file consolidated returns is based upon the principle of levying the tax according to the true net income and invested capital of a single business enterprise, even though the business is operated through more than one corporation. Where one corporation owns the capital stock of another corporation or other corporations, or where the stock of two or more corporations is owned by the same interests, a situation results which is closely analogous to that of a business maintaining one or more branch establishments. In the latter case, because of the direct ownership of the property, the invested capital and net income of the branch form a part of the invested capital and net income of the entire organization. Where such branches or units of a business are owned and controlled through the medium of separate corporations, it is necessary to require a consolidated return in order that the invested capital and net income of the entire group may be accurately determined. Otherwise opportunity would be afforded for the evasion of taxation by the shifting of income through price fixing, charges for services and other means by which income could be arbitrarily assigned to one or another unit of the group. In other cases without a consolidated return excessive taxation might be imposed as a result of purely artificial conditions existing between corporations within a controlled group. See articles 785, 791, 802 and 864-869.

Art. 632. *Consolidated returns.*—Affiliated corporations, as defined in the statute and in article 633, are required to file consolidated returns on form 1120. The consolidated return shall be filed by the parent or principal reporting corporation in the office of the collector of the district in which it has its principal office. Each of the other affiliated corporations shall file in the office of the collector of its district form 1122, along with the several schedules indicated thereon. The parent or principal corporation filing a consolidated return shall include in such return a statement specifically setting forth (a) the name and address of each of the subsidiary or affiliated corporations included in such return, (b) the par value of the total outstanding capital stock of each of such corporations at the beginning of the taxable year, (c) the par value of such capital stock held by the parent corporation or by the same interests at the beginning of the taxable year, (d) in the case of affiliated corporations owned by the same interests, a list of the individuals or partnerships constituting such interests, with the percentage of the total outstanding stock of each affiliated corporation held by each of such individuals or partnerships during all of the taxable year, and (e) a schedule showing the proportionate amount of the total tax which it is agreed among them is to be assessed upon each affiliated corporation. Foreign corporations and personal service corporations need not file consolidated returns. See article 1524.

Art. 633. *When corporations are affiliated.*—Corporations will be deemed to be affiliated (a) when one domestic corporation owns directly or controls through closely affiliated interests or by a nominee or nominees substantially all the stock of the other or others, or (b) when substantially all the stock of two or more domestic corporations is owned or controlled by the same interests. The words "substantially all the stock" cannot be interpreted as meaning any particular percentage, but must be construed according to the facts of the particular case. The owning or controlling of 95 per cent. or more of the outstanding voting capital

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stock (not including stock in the treasury) at the beginning of and during the taxable year will be deemed to constitute an affiliation within the meaning of the statute. Consolidated returns may, however, be required even though the stock ownership is less than 95 per cent. When the stock ownership is less than 95 per cent., but in excess of 50 per cent., a full disclosure of affiliations should be made, showing all pertinent facts, including the stock owned in each subsidiary or affiliated corporation and the percentage of such stock owned to the total stock outstanding. Such statement should preferably be made in advance of filing the return, with a request for instructions as to whether a consolidated return should be made. In any event such a statement should be filed as a part of the return. The words "the same interests" shall be deemed to mean the same individual or partnership or the same individuals or partnerships, but when the stock of two or more corporations is owned by two or more individuals or by two or more partnerships a consolidated return is not required unless the percentage of stock held by each individual or each partnership is substantially the same in each of the affiliated corporations.

Art. 636. Domestic corporation affiliated with foreign corporation.—A domestic corporation which owns a majority of the stock of a foreign corporation shall not be permitted or required to include the net income or invested capital of such foreign corporation in a consolidated return, but for the purpose of section 238 of the statute a domestic corporation which owns a majority of the voting stock of a foreign corporation shall be entitled to credit its income, war profits and excess profits taxes with any income, war profits or excess profits taxes paid (but not including taxes accrued) by such foreign corporation during the taxable year to any foreign country or to any possession of the United States upon income derived from sources without the United States in an amount equal to the proportion which the amount of any dividends (not deductible under section 234) received by such domestic corporation from such foreign corporation during the taxable year bears to the total taxable income of such foreign corporation upon or with respect to which such taxes were paid. But in no such case shall the amount of the credit for such taxes exceed the amount of such dividends (not deductible under section 234) received by such domestic corporation during the taxable year. A domestic corporation seeking such credit must comply with those provisions of subdivision (a) of article 383 which are applicable to credits for taxes already paid, except that in accordance with article 611 the form to be used is form 1118 instead of form 1116.

Art. 637. Consolidated net income of affiliated corporations.—Subject to the provisions covering the determination of taxable net income of separate corporations, and subject further to the elimination of inter-company transactions, the consolidated taxable net income shall be the combined net income of the several corporations consolidated, except that the net income of corporations coming within the provisions of article 635 shall be taken out. In respect of the statement of gross income and deductions and the several schedules required under form 1120, a corporation filing a consolidated return is required to prepare and file such statements and schedules in column form to the end that the details of the items of gross income and deductions for each corporation included in the consolidation may be readily audited.

Consolidated returns—Invested capital

Art. 864. Affiliated corporations: invested capital.—The invested capital of affiliated corporations, as defined in section 240 (b) of the statute and article 633, for the taxable year is the invested capital of the entire group treated as one unit operated under a common control. As a first step in the computation a consolidated balance-sheet should be prepared in accordance with standard accounting practices, which will reflect the

actual assets and liabilities of the affiliated group. In preparing such a balance-sheet all intercompany items, such as intercompany notes and accounts receivable and payable, should be eliminated from the assets and the liabilities, respectively, and proper adjustments should be made in respect of intercompany profits or losses reflected in inventories which at the beginning or end of the taxable year contain merchandise exchanged between the corporation included in the affiliated group at prices above or below cost to the producing or original owner corporation. Such consolidated balance-sheet will then show (a) the capital stock of the parent or principal company in the hands of the public; (b) the consolidated surplus belonging to the stockholders of the parent or principal company; and (c) the capital stock, if any, of subsidiary companies not owned by the parent or principal company, together with the surplus, if any, belonging to such minority interest. In computing consolidated invested capital the starting point is furnished by the total of the amounts shown under (a), (b) and (c) above. This total must be increased or diminished by any adjustments required to be made under the provisions of sections 325, 326, 330 and 331 of the statute and articles 811-818, 831-869, 931-934 and 941 of the regulations, except as otherwise provided in articles 865-868.

Art. 865. Affiliated corporations: intangible property paid in.—(1) In respect of corporations whose affiliation is in the nature of parent and subsidiary companies: (a) in the case of intangible property bona fide paid in for stock or shares prior to March 3, 1917, there may be included in invested capital an amount not exceeding the actual cash value of such property at the time paid in, or the par value of the stock or shares issued therefor, or in the aggregate 25 per cent. of the par value of the total stock or shares of the consolidation outstanding on March 3, 1917 (determined as indicated in items (a) and (c) in article 864), or in the aggregate 25 per cent. of the par value of the total stock or shares shown on the consolidated balance-sheet, being the amount of the capital stock included in items (a) and (c) in article 864 at the beginning of the taxable year, whichever is lowest; and (b) in the case of intangible property bona fide paid in for stock or shares on or after March 3, 1917, there may be included in invested capital an amount not exceeding the actual cash value of such property at the time paid in, or the par value of the stock or shares issued therefor, or in the aggregate 25 per cent. of the par value of the total stock or shares shown by the consolidated balance-sheet, being the amount of the capital stock included in items (a) and (c) in article 864 outstanding at the beginning of the taxable year, whichever is lowest. (c) When intangible property has been acquired in part before and in part after March 3, 1917, the amounts shall be ascertained, respectively, under (a) and (b) above and in the aggregate shall in no case exceed 25 per cent. of the par value of the total stock or shares outstanding at the beginning of the taxable year shown in the consolidated balance-sheet, being the amount of the capital stock included in items (a) and (c) in article 864.

(2) In respect of corporations affiliated by reason of ownership by the same interests, the limitations set forth in paragraphs (4) and (5) of subdivision (a) of section 326 of the statute shall be applied to each corporation separately and the aggregate of the intangible property, so valued, shall be included in invested capital in the consolidated return. In respect of each of the affiliated corporations the aggregate of the amounts ascertained under the provisions of paragraphs (4) and (5) shall in no case exceed 25 per cent. of the outstanding capital stock of such corporation at the beginning of the taxable year.

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Art. 866. Affiliated corporations: inadmissible assets.—Where adjustment is required in respect of inadmissible assets in accordance with the provisions of subdivision (c) of section 326 of the statute, such adjustment shall be made on the basis of the consolidated balance-sheet with due regard to the adjustments and eliminations set forth in articles 864 and 865 and to the provisions of articles 815-818.

Art. 867. Affiliated corporations: stock of subsidiary acquired for cash.—When all or substantially all of the stock of a subsidiary corporation was acquired for cash, the cash so paid shall be the basis to be used in determining the value of the property acquired.

Art. 868. Affiliated corporations: stock of subsidiary acquired for stock.—Where stock of a subsidiary company was acquired with the stock of the parent company, the amount to be included in the consolidated invested capital in respect of the company acquired shall be computed in the same manner as if the net tangible assets and the intangible assets had been acquired instead of the stock. If in accordance with such acquisition a paid-in surplus is claimed, such claim shall be subject to the provisions of article 837.

Art. 869. Affiliated corporations: invested capital for pre-war period.—The invested capital of affiliated corporations for the pre-war period shall be computed on the same basis as the invested capital for the taxable year, except that where any one or more of the corporations included in the consolidation for the taxable year were in existence during the pre-war period, but were not then affiliated as herein defined, then the average consolidated invested capital for the pre-war period shall be the average invested capital of the corporations which were affiliated in the pre-war period plus the aggregate of the average invested capital for each of the several corporations which were not affiliated during the pre-war period. Full recognition, however, must be given to the provisions of section 330 of the statute, particularly the last paragraph thereof, and of articles 931-934.

TREASURY DECISIONS

(T. D. 2836, May 7, 1919)

Tax exemptions of Liberty bonds and Victory notes

The appended circular, issued under date of April 23, 1919, with reference to the tax exemptions of Liberty bonds and Victory notes, is published for the information of internal-revenue officers and others concerned.

Tax exemptions of Liberty bonds and Victory notes

Liberty bonds and Victory notes issued under authority of the acts of congress approved April 24, 1917, September 24, 1917, April 4, 1918, July 9, 1918, September 24, 1918, and March 3, 1919, are entitled, respectively, to the exemptions from taxation set forth in said acts, from which the statements in this circular are summarized and to which they are subject.

- I. *4 per cent. and 4¾ per cent. bonds* are exempt from all federal, state, and local taxation, except (a) estate or inheritance taxes and (b) federal income surtaxes and profits taxes, as follows:

1. First Liberty loan converted 4 per cent. bonds of 1932-1947 (first 4s).
2. First Liberty loan converted $4\frac{1}{4}$ per cent. bonds of 1932-1947 (first $4\frac{1}{4}$ s, issue of May 9, 1918).
3. First Liberty loan second converted $4\frac{1}{4}$ per cent. bonds of 1932-1947 (first $4\frac{1}{4}$ s, issue of October 24, 1918).
4. Second Liberty loan 4 per cent. bonds of 1927-1942 (second 4s).
5. Second Liberty loan converted $4\frac{1}{4}$ per cent. bonds of 1927-1942 (second $4\frac{1}{4}$ s).
6. Third Liberty loan $4\frac{1}{4}$ per cent. bonds of 1928 (third $4\frac{1}{4}$ s).
7. Fourth Liberty loan $4\frac{1}{4}$ per cent. bonds of 1933-1938 (fourth $4\frac{1}{4}$ s).
8. Victory Liberty loan $4\frac{3}{4}$ per cent. convertible gold notes of 1922-1923 ($4\frac{3}{4}$ per cent. Victory notes).

Are exempt, both as to principal and interest, from all taxation now or hereafter imposed by the United States, any state, or any of the possessions of the United States, or by any local taxing authority, except (a) estate or inheritance taxes, and (b) graduated additional income taxes, commonly known as surtaxes, and excess-profits and war-profits taxes, now or hereafter imposed by the United States, upon the income or profits of individuals, partnerships, associations or corporations.

II. *4 per cent. and $4\frac{1}{4}$ per cent. bonds* are entitled to limited exemptions from federal income surtaxes and profits taxes, as follows:

- 4 per cent. and $4\frac{1}{4}$ per cent. Liberty bonds (but not $4\frac{3}{4}$ per cent. Victory notes) are entitled to certain limited exemptions from graduated additional income taxes, commonly known as surtaxes, and excess-profits and war-profits taxes, now or hereafter imposed by the United States, upon the income or profits of individuals, partnerships, associations or corporations, in respect to the interest on principal amounts thereof, as follows:

- \$5,000 in the aggregate of first 4s, first $4\frac{1}{4}$ s (issues of May 9 and October 24, 1918), second 4s and $4\frac{1}{4}$ s, third $4\frac{1}{4}$ s, fourth $4\frac{1}{4}$ s, treasury certificates, and war-savings certificates.
- 30,000 of first $4\frac{1}{4}$ s (issue of October 24, 1918, only), until the expiration of two years after the termination of the war.
- 30,000 in the aggregate of first 4s, first $4\frac{1}{4}$ s (issues of May 9 and October 24, 1918), second 4s and $4\frac{1}{4}$ s, third $4\frac{1}{4}$ s, and fourth $4\frac{1}{4}$ s, as to the interest received on and after January 1, 1919, until the expiration of five years after the termination of the war.
- 45,000 in the aggregate of first 4s, first $4\frac{1}{4}$ s (issue of May 9, 1918, only), second 4s and $4\frac{1}{4}$ s, and third $4\frac{1}{4}$ s, as to the interest received after January 1, 1918, until the expiration of two years after the termination of the war; this exemption conditional on original subscription to, and continued holding at the date of the tax return of, two-thirds as many bonds of the fourth Liberty loan.
- 20,000 in the aggregate of first 4s, first $4\frac{1}{4}$ s (issues of May 9 and October 24, 1918), second 4s and $4\frac{1}{4}$ s, third $4\frac{1}{4}$ s, and fourth $4\frac{1}{4}$ s, as to the interest received on and after January 1, 1919; this exemption conditional upon original subscription to, and continued holding at the date of the tax return of, one-third as many notes of the Victory Liberty loan, and extending through the life of such notes of the Victory Liberty loan.

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160,000 total possible exemptions from federal income surtaxes and profits taxes, subject to conditions above summarized.

III. $3\frac{1}{2}$ per cent. bonds and $3\frac{3}{4}$ per cent. notes are exempt from all federal, state, and local taxation, except estate or inheritance taxes, as follows:

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| <ol style="list-style-type: none">1. First Liberty loan $3\frac{1}{2}$ per cent. bonds of 1932-1947.2. Victory Liberty loan $3\frac{3}{4}$ per cent. convertible gold notes of 1922-1923. | } | Are exempt, both as to principal and interest, from all taxation (except estate or inheritance taxes) now or hereafter imposed by the United States, any state or any of the possessions of the United States or by any local taxing authority. |
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Students' Department

EDITED BY SEYMOUR WALTON

ASSISTED BY H. A. FINNEY

"KITING"

The writer, when on the witness stand, was once asked to define a "kite" as bankers understand it. When he said that it was a piece of paper upheld by nothing more substantial than wind, the judge threatened to punish him for contempt of court for indulging in levity. It was not difficult to show that it was a serious definition.

When a business man buys merchandise and in payment therefor issues his cheque or note, or accepts a time draft drawn on him by the seller of the goods, he has created legitimate commercial paper. At the same time he assumes the indebtedness he acquires an asset that will eventually furnish the funds with which he can liquidate this indebtedness or, what is practically the same thing, some other equivalent liability. Therefore, his paper is based on a solid backing of at least an equivalent value.

It often happens that such a man has exhausted his own capital and his individual bank credit and is still in need of money. He can obtain this money if he can find some one with fairly good credit who is willing to exchange cheques or notes with him. Cheques will tide him over from day to day, and notes will give him relief until they become due. Now, the paper that he has issued has no backing of valuable merchandise, but is based entirely on the credit of the two men. If one of the men fails the other has to pay not only his own paper but also that of the other man which he has endorsed. As the kind of men who indulge in this practice are seldom very strong financially, the failure of one usually carries down the other, and the holder of the paper begins to understand why this kind of paper is called a "kite" upheld by nothing more substantial than wind.

The simplest form of kiting consists in the exchange of cheques. Jones, expecting a number of remittances in Monday's mail, has anticipated them by issuing his own cheques on the previous Saturday. The mail Monday morning proves to be disappointing, and Jones realizes that his bank balance will be short nearly \$500.00 of the amount necessary to cover the cheques that will be presented through the clearing house that day. He borrows a cheque for \$500.00 from his friend Smith, giving his own for the same amount in exchange. By depositing Smith's cheque after eleven o'clock, he insures that it will not be presented through the clearing house until Tuesday. As Smith deposits Jones' cheque Monday afternoon, the two cheques cancel each other in the clearing house. Smith's bank account is not affected, because he has lent credit and not money to Jones. The only victim is the bank, which has paid Jones'

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cheques to the clearing house in money, against which it holds the cheques deposited by Jones, which are not available until the clearings of Tuesday. The transaction amounts to a loan by the bank without its consent, and for which it receives no interest, for one day's use of the amount by which Jones' account would have been overdrawn, if he had not made his Monday deposit. In addition, the bank runs the risk of the loss of \$500.00 if Jones fails and carries Smith down with him.

Of course, the bank can protect itself by refusing to receive Smith's cheque, unless it is certified, when it is deposited by Jones to cover his overdraft. This would require constant scrutiny of both the cheques deposited and those drawn by Jones. However, if Jones is bright enough to think of it he can throw the bank off the track by the simple expedient of giving Smith the cheque of a customer for part of the \$500.00 and his own cheque for the balance only, thus destroying the similarity between the two exchanged cheques. We will take up later the consideration of an infallible rule by which the bank can detect the kite.

A more dangerous form of kiting is the exchange of notes, because the risk of the failure of both maker and endorser is extended over a greater length of time. Each party gives his note to the other for the same amount, due on the same day. Each discounts the note of the other at his own bank, and each takes up his own paper when it comes due. Usually the notes are made for an odd amount in order that they may appear to have been given in settlement for a bill of goods. In this way each of the parties to the transaction enjoys a bank credit to which he is not entitled.

Ordinarily this species of kite may be detected by noting that on the same day when Smith pays the note that he gave to Jones by a cheque on a certain bank, Jones gets his own cheque certified for the same amount in favor of the same bank. However, the astute "kiter" can mask the transaction by having the notes made for somewhat different amounts, settling the difference in currency, or he can throw the bank clear off the track by causing one of the parties to draw currency with which to pay his note, instead of using a certified cheque. The bank would be at fault, however, in the latter case, if it failed to apply one of the rules to be given later.

The third form of kite consists of the drawing of drafts at comparatively short time on parties in another city. For instance, Jones in Chicago draws a draft at ten days sight on Robinson in Omaha, and sells the draft to his Chicago bank. Robinson accepts the draft and at the end of ten days pays it, covering himself by selling a sight draft on Jones to his Omaha bank. Jones has had the use of the money for twelve days, but in this case has paid the bank for it in the discount on the ten days sight draft. If Jones uses currency with which to pay the sight draft drawn by Robinson, the Chicago bank would have no proof of the kite, but the Omaha bank would have, unless Robinson keeps two bank accounts.

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Great ingenuity is sometimes shown in conducting these kites between persons in different cities. In one case the combination was three-cornered. Fairbanks in Chicago and Perry in Denver were dealers in both new and second-hand books, and Demarest in Chicago dealt only in new books published by a large New York house. Fairbanks was in the habit of drawing ten days sight drafts on Perry, claiming that they were against sales of books to Perry. He sold the drafts to the D national bank in Chicago which sent them to M & M, private bankers in Denver. Each draft was duly accepted and was paid at maturity by Perry, who then drew a sight draft, not on Fairbanks, but on Demarest, who always paid in currency. If Perry had not happened to keep his account with M & M, the D bank would not have known of the last link in the chain. As it was, the bank failed to connect Fairbanks with the payment of the draft on Demarest, although it marked the currency which Fairbanks always drew on the day when the sight draft was presented to Demarest. Fairbanks was smart enough to get the money changed at some other bank before he gave it to Demarest. This kite was ended when the proper test was applied to it.

HOW TO DETECT KITING

There are certain rules or axioms which will disclose the existence of kiting when it is practised to any extent and will render it dangerous. One of these is that the legitimate deposits of a business in bank cannot materially exceed its total sales in a year, due allowance being made for an increase or decrease in the amount due from customers. For instance, if there is due from customers on January 1, \$40,000 and on December 31 \$50,000, and the total sales for the year have been \$400,000, the total deposits in bank for the year cannot vary much from \$390,000. In the deposits must be included every means of payment used by customers, such as cash, notes receivable and sight or other drafts paid. The total may be swelled to a small extent by the duplication of some items. A customer may have given his note for \$1,000 which the business discounted at its bank. When the note comes due, it is necessary to send the customer a cheque for \$500.00, for which he gives a new note. This causes a duplication of \$500.00 in the bank movement. Making a liberal allowance of 10 per cent. for such cases, the legitimate deposits can be placed at \$430,000. If the bank account shows deposits of \$800,000, exclusive of the concern's own notes discounted by the bank, the conclusion is irresistible that very extensive kiting is being done. The only sources from which a business can receive money are the customers to whom it has sold goods, unless, of course, it has sold some of its fixed assets during the year. The existence of the practice having been established, a scrutiny of the concern's deposits and cheques will disclose the particular methods adopted.

Another rule is that an ordinary manufacturing or mercantile concern seldom needs currency except for payrolls and some special payments, such as those to the United States government. Therefore, when such a concern is in the habit of drawing currency, especially if in large bills,

it is almost certain that it is making payments which it does not wish to have traced. The secrecy is suspicious and should lead to inquiry as to its cause. In the vast majority of cases it will be found that the currency is to be used to pay one item of a kite, the existence of which would be exposed if a cheque were used that would proclaim the object for which it was drawn.

Still another rule is that one business concern does not pay cheques to another in the course of legitimate transactions, unless it owes money to the other. In the first example given above it is very probable that Jones owes an account to Smith, because Jones would naturally turn, when asking a favor, to the person who is under some obligations to him, which Smith would be to a certain extent if Jones bought rather heavily from him. Therefore the mere fact that Jones gave Smith a cheque for \$500.00 might not mean anything more than that a part payment had been made on an open account. It again becomes necessary to know something about the volume of the business, because if Jones buys \$12,000 a year from Smith there is no occasion for him to pay Smith cheques averaging \$3,000 or \$4,000 a month. Sometimes it is not necessary to ask any questions about the volume of purchases from Smith, as the character of the goods may be such that Jones could not use all that his cheques would seem to buy. This is especially true when the kiter is in the habit of borrowing cheques from his landlord, as is frequently the case.

If it is necessary to ask questions about the total volume of business, it must be done in such a way as to avoid suspicion, for if the kiter has any reason to suspect the motive for the question, he will either evade giving any answer or he will give one that is not true. If the question is asked in an off-hand way when the subject of credit is not being discussed and the customer is not on guard, the answer will probably be somewhere near the truth.

The same rule will naturally apply to notes. No legitimate note would be given by one concern to another, except in payment of a debt incurred in the course of business. Therefore when Jones presents Smith's note to his bank for discount, the bank has a right to ask for an explanation of why Smith gives his note to Jones, when Jones buys from Smith, but does not sell him anything. Unfortunately, the bank usually asks no questions, contenting itself with merely looking up Smith's rating.

Sometimes what appears to be the kiting of notes is really a technically correct use of them. In one case in point A was a dealer in slate and marble mantels, when they were still in general use, and B was a manufacturer of wooden mantels. When either of them got a contract to furnish both kinds of mantels to a new building, he would procure from the other the kind that he did not carry. Instead of settling the balance of the reciprocal account every month, A, who was financially weak, prevailed upon B to adopt the plan of each one's giving a 90 day note to the other for each transaction. When the bank in which A kept his account

discovered that notes were thus being given both ways, it refused to discount B's notes for A, although B's credit was excellent, until A gave assurances that the notes were not kites but were based on actual transactions. When A finally failed, B undertook to refuse payment of his notes held by A's bank, on the ground that they were given without consideration and that this fact was known to the bank. When it was shown that the bank had guarded itself against this contingency, B was obliged to take up his own notes, in addition to losing those that A had given him. In this case, of course, the notes were not issued in pairs of the same date and amount.

The final rule covers drafts and is to the effect that no one has a right to draw on another person, unless he has sold something to that person. The thing sold need not be merchandise; it may be services, or even professional advice. The only exception to this rule occurs when the debtor draws back on his creditor for part of a maturing note or draft which he is not able to meet in full, or for some other reason which can be easily explained. Such instances would naturally be rare.

It was the application of this rule that caused the discovery of the three-cornered kite already mentioned. Since Fairbanks in Chicago and Perry in Denver were both dealers in new and second-hand books, Fairbanks' drafts on Perry could easily be based on shipments of either class of goods, while the drafts on Fairbanks would naturally be the result of shipments of second-hand books to him by Perry. The only suspicious circumstance was the fact that Perry always drew his draft on the day when his ten-day acceptance came due. Perry did not draw on Fairbanks, but on Demarest, who dealt exclusively in new books published by the concern which he represented. It was therefore impossible for Perry to sell him anything, and the kiting nature of the transactions between them was self-evident. The following laconic correspondence passed between the D national bank in Chicago and the banking firm of M & M in Denver:

D to M & M—What goods does Perry sell Demarest?

M & M to D—Perry does not sell any goods to Demarest.

D to M & M—Then how can Perry draw on Demarest?

M & M to D—Thanks for the hint.

When Perry's next acceptance came due, M & M refused to credit him with his sight draft on Demarest; the acceptance was protested; Perry made an assignment and Fairbanks was soon forced to do the same.

While this subject is of more importance to bankers than to the ordinary merchant, the latter should not consider that it has no interest for him. No one can indulge in extensive kiting without the facts becoming known or at least suspected. When a merchant suspects that a customer is kiting, he should investigate, to do which it may be necessary to have a confidential interview with the customer's bank. If the kiting is proved, the merchant should take steps to protect himself if necessary. The practice does not always end in disaster, because the kiter may be abundantly good but have too little capital in his business. If he is making money and leaves part of his profits in the business he may

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accumulate sufficient capital for his needs. But the usual result is disastrous, and concerns that indulge in the practice should be looked upon with grave suspicion by the credit men.

PARTNERSHIP ADJUSTMENTS

The following letter and the reply to it are given in order to call attention to several points in regard to partnership accounts which may be familiar to many but do not seem to be fully understood by all.

Editor, Students' Department:

SIR: The writer has lately adjusted a matter for one of our clients which on account of its peculiar complications, is hereinafter stated for such use as you may consider that it deserves.

A & B, as a partnership, are conducting a farm and share equally in its gains and losses.

After their partnership books were closed on January 1, 1919, an equal amount stood to the credit of the two investment accounts and the following balances were left open:—

- (1)—Bills receivable account for B's note owing to A & B for \$911.14.
- (2)—An account for \$465.86 owing to A & B by B.
- (3)—Bills payable account for A & B's note owing to A for \$500.00.
- (4)—An account for \$536.55 owing to A by A & B.

On accounts 1 and 2 above there was \$54.61 in accrued interest owing to A & B by B.

On accounts 3 and 4 above there was \$65.80 in accrued interest owing to A by A & B.

The personal books kept by A showed at the same time in bills receivable account a note for \$617.77 owing to A by B individually, on which the interest accrued amounted to \$26.53, and the following debit balances that corresponded with similar credit balances (accounts 3 and 4) in the partnership books of A & B:—

Bills receivable, \$500.00 for A & B's note owing to A.

An account for \$536.55 owing to A by A & B.

B was not prepared to pay any money to adjust their interests and it was decided to settle the whole matter in one new note. The question decided was the amount for which the new note should be made.

The matter is settled; but I thought that the complications involved might make the question of interest to the readers of your department.

Yours very truly,

C. E. FREEMAN.

Indianapolis.

The letter does not state to whom the note shall be given. There are three alternative settlements possible, viz.:

(1) B may give a note to the firm, to cover the whole of his indebtedness.

(2) B's note may be only for enough to pay off A.

(3) B may give a note to A.

In the first two settlements the note is transferred to A to pay his claims, the balance to be left in an open account.

Mr. Freeman's solution was as follows:

B's personal account

54.61

Interest

54.61

For interest due on note and account

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Interest	65.80	
A's personal account		65.80
For interest due on note and account		
<hr/>		
A capital	5.59	
B capital	5.60	
Interest		11.19
To close interest account		
<hr/>		
Bills payable	500.00	
A's personal account	602.35	
A capital		1,102.35
To close A's note and personal account		
<hr/>		
B capital	1,431.61	
Bills receivable		911.14
B's personal account		520.47
To close B's note and personal account		
<hr/>		
Bills receivable	1,266.99	
B's capital		1,266.99
To cover B's impaired capital		
<hr/>		
A's capital	1,266.99	
Bills receivable		1,266.99
To equalize capital accounts by transfer of B's note to A.		
<hr/>		
It then becomes necessary to bring in A's personal books and on them to make the following entries:		
Bills receivable	1,266.99	
A & B		1,266.99
For B's note endorsed by A & B		
<hr/>		
B	26.53	
Interest		26.53
For interest accrued on his note		
<hr/>		
B	1,884.76	
Bills receivable		617.77
Bills receivable		1,266.99
To consolidate B's indebtedness		
<hr/>		
Bills receivable	1,911.29	
B		1,911.29
For new note in settlement		

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He also gives the other entries in A's books in regard to his own note and interest, but they are not material.

The question was referred to another certified public accountant, whose answer somewhat condensed was as follows:

As A and B were equal partners they each owned half the assets, including the note and account of B, and were also equally liable for the indebtedness, including the note and account of A. This justified the following entries:

A, capital	715.80	
B, capital	715.81	
Bills receivable, B's note		911.14
B, personal account		465.86
Interest, on above		54.61
Bills payable, note due to A	500.00	
A, personal account	536.55	
Interest, on above	65.80	
A, capital		551.17
B, capital		551.18

Then a statement is prepared as follows:

Total due by B	1,431.61	Due A	715.80	Due B	715.81
Total due to A	1,102.35	" "	551.18	" "	551.17

Total due A on firm books	1,266.98
Outside note held by A	617.77
Interest	26.53

Total due from B	1,911.28
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which is settled by a note given by B to A.

This matter is important solely because the two answers show how it is possible to reach a correct result by erroneous methods.

In both answers the settlement is not made on the firm's books. There is nothing in the problem to indicate that A's personal books are to be used and the settlement made on them. On the contrary, since the firm is the client, it is necessarily inferred that all the entries shall be made on the firm books. It was not necessary to inspect A's personal books in order to ascertain the existence of the note for \$617.77 with the accrued interest. All that was needed was for A to produce the note and to request that it be included in the settlement and for B to agree to it. This would necessitate the bringing into the firm books of the outside note and interest.

The only other criticism of the first answer is that B gave two notes instead of one, although the final result is one note as required. The fact that A gives up a note endorsed by A & B for B's plain note is not very material, because A, being a partner, does not benefit by having the firm on the note. Altogether, Mr. Freeman's answer is entirely correct, if we allow the introduction of A's personal books.

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The principal objection to the second answer is that it makes unauthorized entries in the capital accounts of the partners. The only charges that can be legitimately made to a partner's account are losses or withdrawals of money or other assets, and the only credits are profits or contributions of value. Charging A's capital with half of B's debit accounts would be justifiable only in case B's accounts were a total loss, which of course cannot be the case as long as B has a balance on his capital account. The credit of half of A's accounts to B's capital would be justifiable only in case A made those accounts a profit by donating them to the firm. Since no money passed there is no question of any withdrawals or contributions of capital. On the face of the entries B is forgiven \$715.80 of his indebtedness and is presented with \$551.18 of A's claims against the firm, thus receiving a total free gift of \$1,266.98. There is no entry to indicate that this was afterwards offset by a private deal between A and B, or that any note was issued, and there is no room for such an entry, since the capitals are equalized and all personal accounts closed. The tabulated statement is a mere memorandum and not an entry.

To carry out the provisions of the agreement correctly and to make a proper record of the transactions, it is necessary to bring all the items together by an entry showing that A has transferred to the firm for credit to his account B's note for \$617.77 and interest of \$26.53, chargeable to B's personal account. The condition would then be as follows:

DUE FROM B		DUE TO A	
Note	911.14	Note	500.00
Open account	465.86	Open account	536.55
Accrued interest	54.61	Accrued interest	65.80
Note received from A	617.77	B's note transferred	617.77
Accrued interest	26.53	Accrued interest	26.53
<hr/>		<hr/>	
Total due from B	2,075.91	Total due to A	1,746.65

Referring to the statement that there are three ways in which a note can be given in settlement—

(1) B may give a note to the firm for \$2,075.91 and receive credit closing his accounts. The firm may then transfer the note to A, charging his accounts off, except that he will have a debit balance left of \$329.26, the excess of the note over his various credits.

(2) B may give the firm a note for \$1,746.65, to be transferred to A, paying him off, but leaving a debit balance of \$329.26 in B's account.

Neither of these settlements is admissible, because neither completes the settlement, there being in each case a debit balance in one of the accounts.

(3) The proper method is to close the notes and personal accounts into the respective capital accounts.

B, capital	2,075.91	
B, notes, account and interest, detailed		2,075.91
A, notes, account and interest, detailed	1,746.65	
A, capital		1,746.66

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Since B's capital has been debited and A's capital credited the difference between the two capitals is now \$3,822.56. To bring them to equality again, B gives the firm his note for half the amount made to his own order and endorsed by him, the entry being

Bills receivable	1,911.28	
B, capital		1,911.28
Note given by B to restore impaired capital		

The firm then transfers the note to A without endorsing it

A, capital	1,911.28	
Bills receivable		1,911.28
B's note transferred to A to equalize capitals.		

In this way a complete settlement is made of all the personal accounts by giving one note and all the transactions are of record on the books of the firm. The debit balance of \$329.26 which was left by either of the first two settlements is now replaced by a reduction of \$164.63 in the capital of each partner.

Apparently the firm of A & B did not know that the note of a partner should not appear in the ordinary notes receivable or notes payable account, as the case may be, on the firm's books. Except where a partner buys goods from the firm in the ordinary course of business, no indebtedness of his to the firm should be charged to the regular accounts of notes receivable or accounts receivable. Such an item is not an available asset—it is rather a reduction of capital and should be specifically shown on the balance-sheet as due from partners. It is far better to charge such items against the capital and keep them off the books. It is not as objectionable to include amounts due to a partner in notes or accounts payable, unless they are relatively large, when they must be definitely stated, since a partner, being on the inside, has advance information of coming trouble and can protect himself at the expense of creditors. The same rule holds good in a corporation with regard to amounts due from or to officers and employees.

The points brought out in the above may seem to some not worth the space taken up. They would not be, if it were not true that the employment of proper methods is almost, if not quite, as important to the trained accountant as the reaching of correct results.

OMISSION FROM INVENTORY

Editor, Students' Department:

SIR: In the *Students' Department* of the January, 1919, issue, page 75, second paragraph, it is stated that profits are not affected by omission to include in the inventory goods for which a liability has been incurred and which should appear on the books. As the determination of profits is dependent upon the inventory, I would appreciate an explanation of the statement. If the liability is taken on the books, what would be charged, if not the inventory?

New York

Yours truly,
JWT

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The statement referred to is that profits are not affected when goods on hand are not included in the inventory and have also not been charged to operations as a necessary concomitant to the credit of their cost to accounts payable.

"If the liability is taken on the books, what would be charged if not the inventory?" The charge would certainly not be to inventory. It would be to that phase of the operations to which the purchase belonged. It may be \$10,000 worth of raw material, in which case the purchase record would show that amount in the appropriate debit column as a charge to operations, offset by an equal credit to accounts payable. At the end of the year all this material is on hand, together with \$25,000 more of the same class. This \$35,000 may be charged to raw material inventory and credited to raw material account, or it may be brought down as a balance in the raw material account. In either event the \$10,000 in question appears on the right side of the raw material account and cancels the same amount appearing on the left side as posted from the purchase record. The balance of the raw material account, after the inventory is credited to it, is the charge against operations for the materials consumed, and is the only profit and loss item in the account. If an equal amount is omitted from each side of the account, the balance is not affected and therefore the profits are not changed.

Suppose the purchases of this material were \$10,000 in each month of the year. The cost of material consumed would be:

Inventory January 1	30,000	
Purchases	120,000	
	<hr/>	150,000
Inventory December 31		35,000
		<hr/>
Cost of material consumed		115,000

In order to make a better financial showing, the management omits the December purchase of \$10,000 from the books and does not include it in the inventory. The cost of material would then be

Inventory January 1	30,000	
Purchases	110,000	
	<hr/>	140,000
Inventory December 31		25,000
		<hr/>
Cost of material consumed		115,000

There is no effect on the profits, but the financial indebtedness is shown as \$10,000 less than the truth.

PREMIUM ON CONVERTIBLE NOTES

Editor, Students' Department:

SIR: I would like very much to know what would be the best accounting practice in a matter the details of which are described below:

A certain corporation on September 1, 1917, issued \$6,000,000 worth of five-year six per cent. convertible notes redeemable at \$105 and interest in whole or in part on sixty days' notice, subject to the right of

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conversion into the stock of the company at the rate of 10 shares of stock for each \$1,000 par value of notes, the said stock having no par value. By the recent annual report of the company for the year ended December 31, 1918, it is shown that \$734,500 worth of the said notes were converted into the stock, presumably at the rate of \$100 per share for the stock. The company also purchased on the open market \$1,936,000 worth of notes, but there is nothing shown in the annual report as to what the company actually paid for these notes. In case the company paid more than face value for the notes, to what account would the premium be charged and how would it show on the balance-sheet of the company? Would it first be shown on the profit and loss statement and, therefore, only in the surplus item of the balance-sheet? I understand, of course, that the \$1,936,000, being the face value of the notes retired, would be shown as a reduction in the outstanding note issue; but I am not quite certain as to where the premium paid would show.

C. M. B.

The entry for the notes converted into stock would be

Five-year notes payable	734,500	
Capital stock		734,500

unless all the authorized stock had been placed on the books by an entry debiting unissued stock and crediting capital stock, in which case the credit would be to unissued stock. Since the stock has no par value, this entry could hardly have been made.

When the company purchased the notes in the open market, it probably paid accrued interest on them. This is a financial expense and must be charged to interest, the same as the semi-annual interest on the rest of the notes. If it also paid a premium, this would be a loss, but not a current expense. The interest and premium are assumed to be what was paid. The entry would be (cash being journalized for convenience):

Five-year notes payable	1,936,000	
Interest (average $1\frac{1}{2}$ months)	29,040	
Premium on 5 year notes (average 3%)	58,080	
Cash		2,023,120

The premium would be charged direct to surplus and not to profit and loss, since it is not a normal expense but one that is extraordinary and does not constantly recur.

Neither the interest nor the premium would appear on the balance-sheet, but their effect would be to decrease the balance of surplus.

Book Review

OFFICE ADMINISTRATION, by J. WILLIAM SCHULZE. *McGraw-Hill Book Company, Inc.*, New York. 295 pp. Cloth, \$3.00 net.

The present volume is an improvement over *The American Office*, by the same author, in many ways, not the least of which is originality. It is also broader in scope and combines more deftly information, versatility and interest.

Office Administration is not only a practical reference manual but a volume which offers to a certain type of mind pleasant diversion. It would also serve well as a text.

The author has, as he admits in the preface, departed from that to which he alludes as the academic arrangement and chosen a course which to him seems to follow the "practical every day viewpoint of the business office." One might expect the author to discuss, in the order named, the materials of administration, the organization thereof and the subsequent procedure with its accompanying problems. Instead he begins with a background called the "evolution of the modern office." Not until chapter X. is anything said of the office layout, which is immediately preceded by a chapter on "organization procedure." The whole of the material is so well connected and blended, however, that the technical defect in the organization does not in the main annoy one who is inclined to be rather critical. It is most apparent toward the end where the book dwindles away in a chapter on "business correspondence."

There is a wealth of good material in many of the chapters, noticeably those on selecting office workers, training office employees and office layout.

There is also much straightforward advice which should be of value to those charged with the responsibility of office management, as witness the following: "The office manager's energies should be devoted to the discovery of means by which his present payroll will produce more results."

The book as a whole is instructive, interesting and helpful. Many an office employee as well as executives will be better for its existence.

JOHN RAYMOND WILDMAN.

Certified Public Accountants of Massachusetts, Inc.

The Certified Public Accountants of Massachusetts, Inc., held the annual "Ladies' night" at the Copley-Plaza hotel May 6th. More than one hundred members and guests were present. The invited guests included the bank commissioner, Augustus L. Thorndike, the collector of internal revenue, John F. Malley and several state and city officers. Officers of the association are: president, Edwin L. Pride; vice-president, Hollis H. Sawyer; secretary, George Lyall; treasurer, Gerald Wyman.

Davies & Nield, 103 Park avenue, New York, announce the dissolution of partnership by mutual consent. The practice will be continued by W. Sanders Davies and Allan Davies as Davies & Davies. Charles F. Nield is retiring from public practice.

Greeley & Giles announce the dissolution of the firm by mutual consent. Cecil D. Giles, Richard E. Niederwiessen, and John W. Fahr will conduct their practice under the firm name of C. D. Giles & Co., with offices at 140 Nassau street, New York.

George Shedden and William McAdam announce that they have formed a partnership under the firm name of Shedden & McAdam, with offices at 664-665 Empire building, Seattle, Washington, and 530 Provident building, Tacoma, Washington.

David A. Jayne and P. M. MacCutcheon announce the formation of a partnership under the firm name of Jayne & MacCutcheon with offices in Masonic Temple, Charleston, West Virginia.

Chas. E. Cady, Norman L. Nathan and Daniel Feder announce the formation of a partnership under the firm name of Cady, Nathan & Feder with offices at 1400 Broadway, New York.

C. Elmer Wiegner and Charles S. Rockey announce the formation of a partnership under the firm name of Wiegner, Rockey & Co., with offices at 584-586 Drexel building, Philadelphia

Vollum, Fernley, Vollum & Rorer announce that they will resume the original firm name of Vollum, Fernley & Vollum, with offices at 907-12 Lincoln building, Philadelphia.

Reed, McCook & Hoyt announce that Mr. McCook and Mr. Dougherty have resumed practice as members of the firm. Lester H. Washburn has been admitted to partnership.

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Louis P. Galenson and Max Schlessinger announce the formation of a partnership under the firm name of Galenson & Schlessinger, with offices at 15 Park Row, New York.

Haskins & Sells announce the opening of an office in Philadelphia in the Franklin Bank building, and the appointment of Edmund C. Gause as resident partner.

H. Winfield Wright has resumed practice as a member of the firm of Strickler, Wright & Co., Widener building, Philadelphia.

William Guthrie & Co. announce the opening of an office in Kennedy building, Omaha, in charge of William Bryden.

Baldwin, Norlin & Sneddon announce the formation of a partnership with offices in Penobscot building, Detroit.

Patterson, Teele and Dennis announce that Stanley G. H. Fitch has become a partner of the firm.

Sparrow, Harvey & Co. announce the removal of their offices to 145 Nassau street, New York.

Raymond C. Brown & Co. announce the removal of their offices to 290 Broadway, New York.

Nathaniel Pomerance announces the removal of his offices to 350 Broadway, New York.

Saul Levy announces the opening of an office at 120 Broadway, New York.



